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FIRE ENGINEERING

The Journal of the Fire Protection Profession Since 1877

Member

JULY, 1943

Vol. 96. No. 7

Defense Materials Warehouse Burns at Pittsburgh, Pa. Because of Dense Smoke and Fumes, Fire Fighting Operations Had to Be Conducted from Without the Structure.

A CASE - SHEPPERD - MANN PUBLICATION

TESTED PROVEN

EMERSON RESUSCITATOR

The safety of a resuscitator, more than anything, is made certain through repeated tests. Exhaustive tests are your assurance of the safety of Emerson Resuscitators. Through actual use, the dependability of Emerson Resuscitators has been proven definitely. Many leading hospitals, the armed forces and, more particularly, many leading fire departments have, through actual use, proven the usefulness and dependability of the Emerson Resuscitator.

Most models still available in reasonable time. Write now for information.

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Clear The way

WITH A *Fury* exhaust whistle!

The Fury is dependable under all service conditions.

● The tone of the FEDERAL Fury is penetrating and powerful—it gets instant action—clears the way for blocks ahead. Designed especially for emergency vehicles, the Fury Exhaust Whistle can be counted on to protect property and save lives.

The Fury is constructed of malleable iron—a non-critical material. The two working parts are assembled at our plant, and are shipped complete with pull cord and tension spring. Each Fury Exhaust Whistle is accurately machined by FEDERAL to fit the exhaust pipe of your particular vehicle. Shipment can be made immediately, and installation is simple and fast.

FEDERAL can supply a wide variety of electric sirens for those communities which do not prohibit the use of sirens on emergency vehicles.

WRITE FOR BULLETIN

FEDERAL ELECTRIC CO., Inc.

SIREN HEADQUARTERS

8702 South State Street Chicago, Illinois

FIRE ENGINEERING

A Consolidation of Fire and Water Engineering, The Fire Engineer and Fire Protection

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FRED SHEPPERD
Editor

No Firefighter!

FIREFIGHTING today, more than ever before in history, requires sterling qualities of manhood.

- Once upon a time it was sufficient for a man to be strong and courageous—and trimmed down for action!
- Today, physical qualities are still vital, but they must be backed up by brains and the ability to utilize effectively the new-day mechanical equipment, supplies and gadgets that have so revolutionized modern fire fighting.
- A glance through any issue of this publication will show the wealth of new and ever improving help that is being placed in the hands of the modern fire fighter.

I. A. F. C. Next!

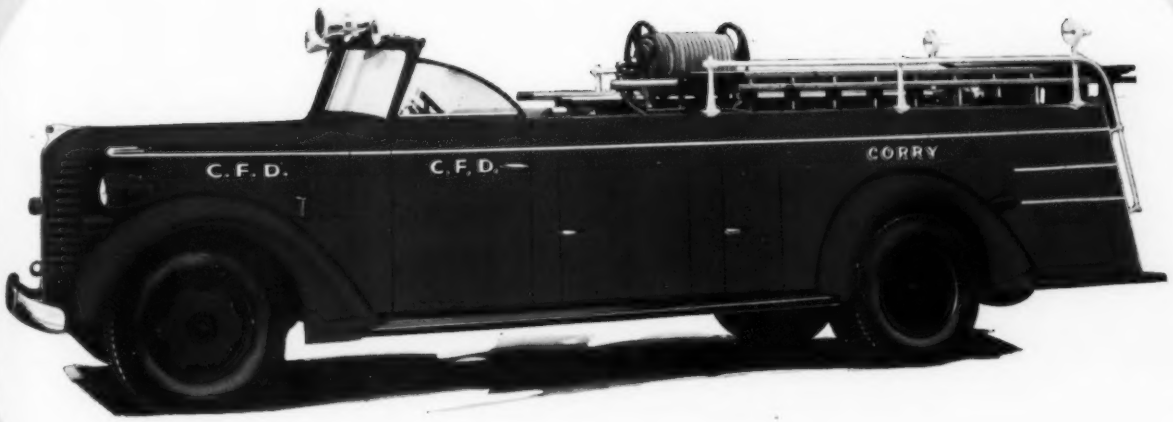
- Next month's issue of FIRE ENGINEERING (August) will be the big International Association of Fire Chiefs Wartime Conference Number. Don't miss it! It will contain an unusual display of "what's new and best" in fire fighting equipment.

The Publishers

FIRE ENGINEERING

The Journal of the Fire Profession since 1887; published on the tenth of each month by Case-Shepperd-Mann Publishing Corp., 24 West 40th St., New York 18, N. Y., also publishers of *Water Works Engineering, Sewage Works Engineering*, etc. ¶Subscription price U. S. and Latin America, $2 a year; Canada, $2.50; Foreign, $3; Single copies, 25c. ¶Member of Audit Bureau of Circulations and Associated Business Papers, Inc. ¶Entered as second-class matter April 15, 1929, at the Post Office at New York, N. Y., under Act of March 3, 1879. ¶Contents of this issue copyrighted, 1943, by Case-Shepperd-Mann Publishing Corp. ¶KARL M. MANN, President; I. HERBERT CASE, Vice-President and General Manager; W. J. GIBSON, Eastern Representative; WM. H. TOPHAM, Circulation Manager. CHICAGO OFFICE: W. S. CLEVENGER and L. M. ROCHE, 6 No. Michigan Ave., Chicago 2, Ill.; SAN FRANCISCO: CHARLES H. WOOLLEY, 605 Market Street, San Francisco 5, Cal.; LOS ANGELES: AUGUST HAURIN, 6000 Miramonte Blvd., Los Angeles 1, Calif. ¶Printed in U. S. A.

A CASE-SHEPPERD-MANN PUBLICATION
"Specialized Leadership"



Buffalo "Pathfinder" Triple Combination recently
delivered to Corry, Pa.

ESSENTIAL
CIVILIAN PROTECTION

★ ★ ★

BUFFALO FIRE APPLIANCE CORPORATION
BUFFALO . . . . NEW YORK

Dependable

The Seagrave All-Steel Aerial Ladder has a record of unfailing dependability. No other Aerial Ladder can give you as much in safety and sturdy constructional features as the Seagrave. . . . No holes, no bolts, no rivets to weaken the ladder . . . Every inch is thoroughly welded for greater strength. . . . Main beams are of hollow I-Beam rust resisting alloy steel. . . . All struts, tubular steel rungs, and diagonals are electrically welded for greater safety. . . . Each section of the Seagrave Aerial rigidly locks into place converting the ladder into a single rigid unit. Such construction is one of the reasons why Seagrave is still "The Greatest Name in Fire Apparatus."

THE SEAGRAVE CORPORATION
COLUMBUS, OHIO
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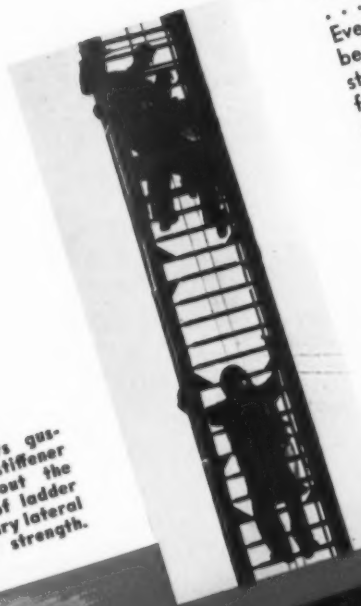
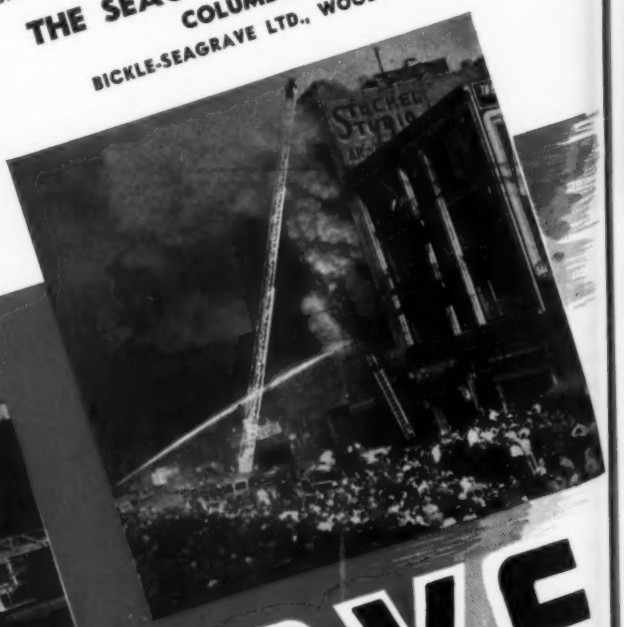


Illustration shows gusset plate and stiffener blocks throughout the entire length of ladder to give necessary lateral rigidity and strength.



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THE GREATEST NAME IN FIRE APPARATUS

Wherever Artificial Respiration is Needed to Save Lives . . . . . .

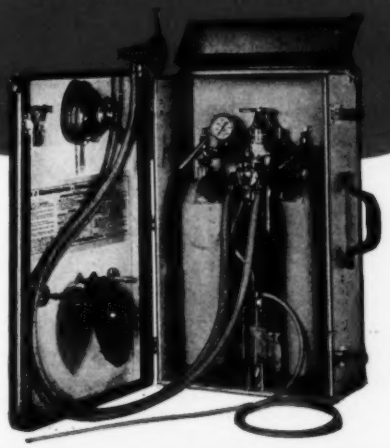
You can't afford to take chances with anything but the best—

THE DEPENDABLE

E & J

RESUSCITATOR INHALATOR and ASPIRATOR

FIRST CHOICE IN FIRST AID



PIONEERS in the development of automatic breathing machines, E & J established many years ago the merit of mechanical artificial respiration after rigid tests in leading laboratories and clinics. Today, automatic resuscitation stands accepted by the medical profession because of the skill, ingenuity and precision workmanship of E & J engineers.

We are indeed proud that our years of research, work and faith have been successful in furthering medical progress and have resulted in the saving of many lives which otherwise might have been lost.

We invite you to investigate the outstanding record of life saving which the E & J Resuscitator, Inhalator and Aspirator has made in the many hundreds of Hospitals, Fire Departments, Police Departments, and First Aid Squads in which it is used.

Write to any of our distributors listed below.

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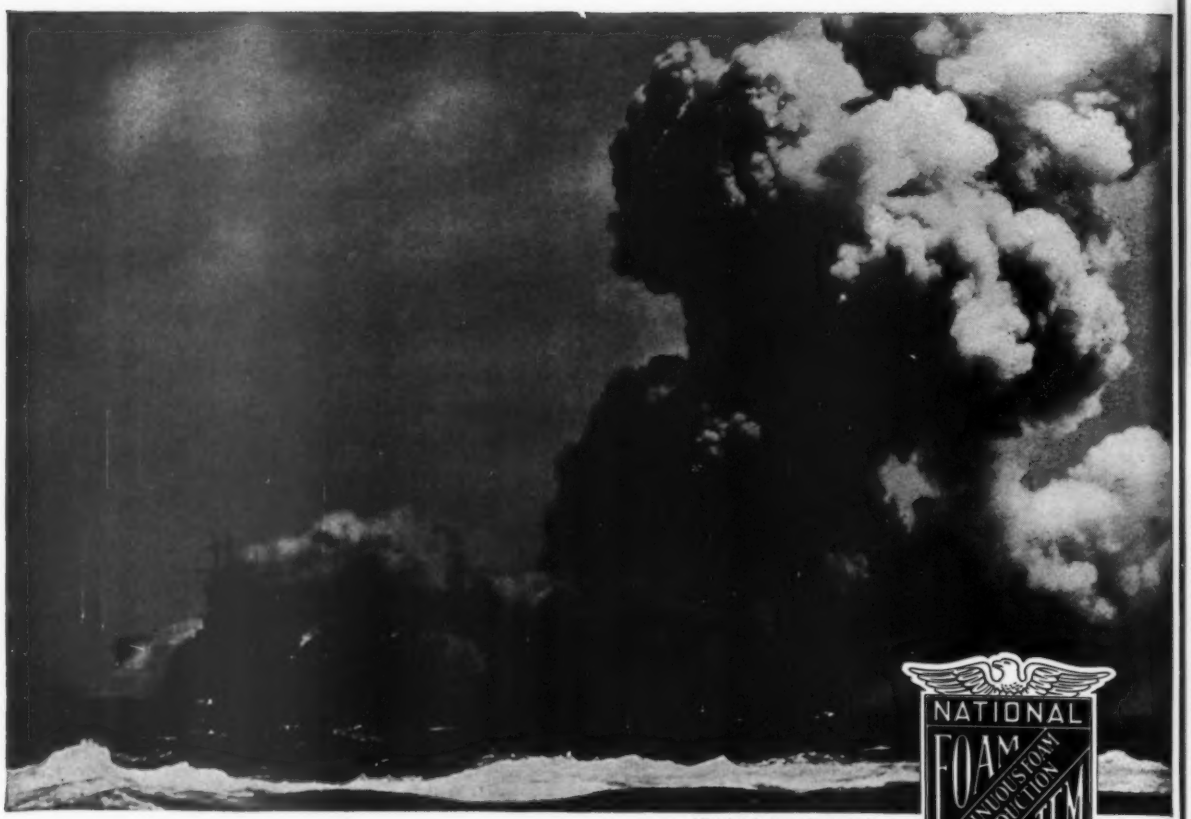

Official U. S. Navy Photograph

National Foams for Difficult Fires

National Foams have been developed for extinguishing the most hazardous and difficult types of fire especially where water cannot control or is ineffective. Equipment for the application of National Foam has been evolved to meet every known requirement—from the small blaze to oil refinery blasts or fires on ships at sea.

National Foam System, Inc., is the evolution of an organization whose business since 1819 has been to promote better methods of fire fighting. Fire foam and necessary equipment for its application have been developed and perfected by National Foam System, Inc., who are recognized authorities in this field.

National Foams excel under this four-way test:

They flow evenly and spread to make a flowing blanket.
Bubbles cohere forming a gas-tight cover.
They adhere tenaciously to surface covered. Foam remains intact sufficient time to extinguish the fire and prevent flashbacks.

National Foams are in use by most oil refineries. They have been adopted and are used extensively by the U. S. Navy and the Merchant Marine.

National Foam System has equipment especially designed for use of Fire Departments to meet all types of fire fighting requirements whether for City, Volunteer or Plant Fire Department use. Our engineers will gladly consult with you and advise regarding type of equipment which will most effectively meet your needs.

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Specializing in Foam Fire Protection

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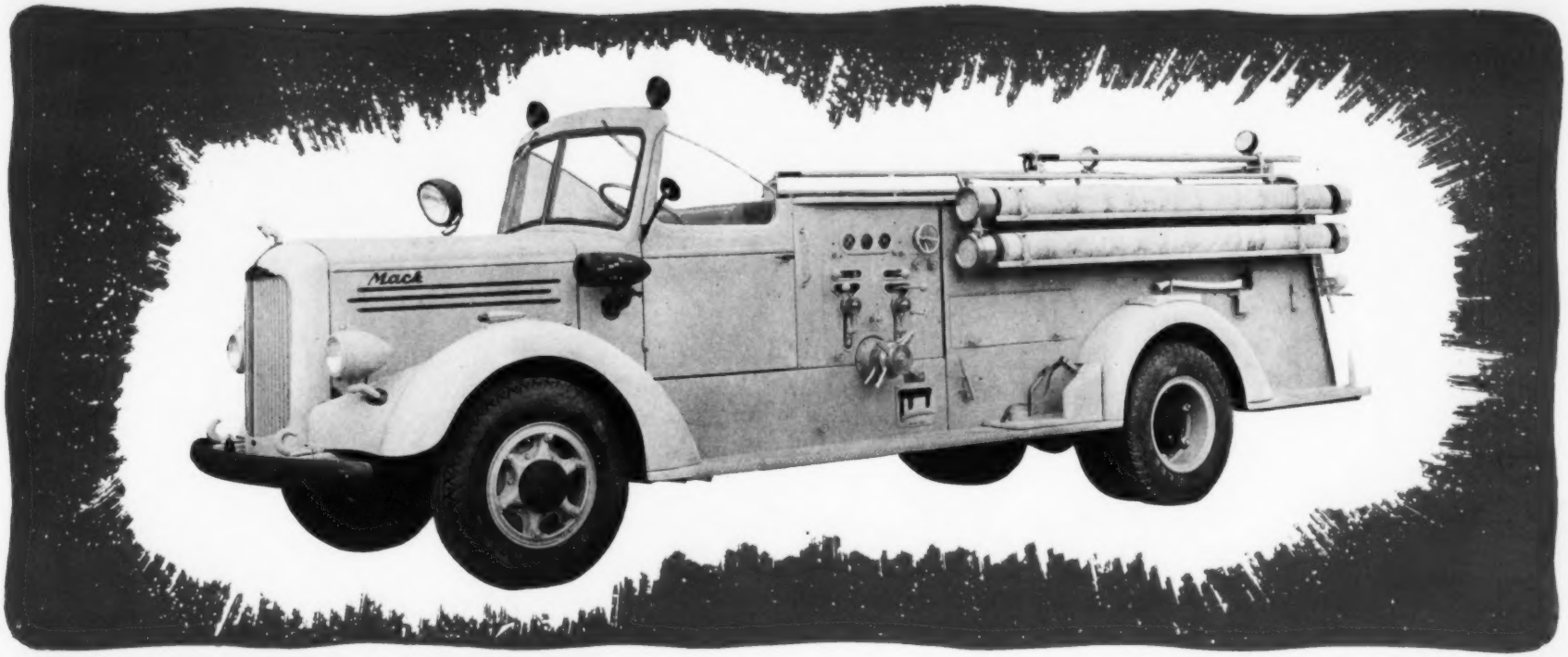
MACK MANUFACTURING CORPORATION, FIRE ENGINE DIVISION, EMPIRE STATE BUILDING, NEW YORK, N. Y.



ILLUSTRATED ABOVE: MACK 1000 GALLON TRIPLE COMBINATION PUMPING ENGINE.

Grass fire or four alarm, there's a Mack for the job. And you can count on Mack fire-fighting equipment to do that job in the great Mack tradition of dependable performance.

BUY U. S. WAR BONDS

Mack

FIRE APPARATUS

If your community needs additional fire-fighting equipment, and if you can obtain permission from the War Production Board — think of Mack. Remember, Mack Fire Apparatus is backed by the greatest engineering and manufacturing resources in the industry.

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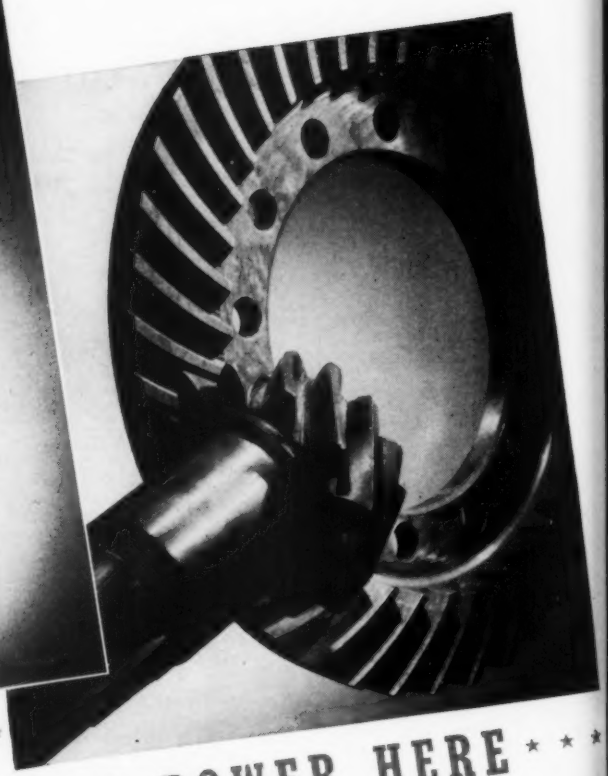
It will help if you mention FIRE ENGINEERING *when writing advertisers*



LESS WEAR HERE * * * MORE POWER HERE * * *

at the same time

RING-FREE REMOVES CARBON

This is no time to let carbon and unnecessary wear waste hard-to-replace parts . . . waste fuel . . . waste productive horsepower. Lubricate your power plant more efficiently with Macmillan RING-FREE Motor Oil. By reducing friction *fast*, RING-FREE delivers direct to the driveshaft more of the horsepower ordinarily wasted in overcoming motor friction. And in addition, it actually removes carbon while the engine runs! Carbon removal is a natural RING-FREE function, inherent in the crude oil and retained by the exclusive Macmillan patented refining process. To remove carbon . . . to minimize "downtime" . . . to get maximum fuel conservation . . . and to get all-out performance — start using RING-FREE now!

Macmillan RING-FREE Motor Oil combines these vital qualities: **1**—Removes Carbon, **2**—Reduces Friction *Fast*, **3**—Saves Fuel, **4**—Has Great Film Strength, **5**—Has High Heat Resistance, **6**—Long Cling to Metal, **7**—Fast Penetration, **8**—Is Non-Corrosive, **9**—Is Less Affected By Dilution.

MACMILLAN PETROLEUM CORP.

50 W. 50th St., New York • 624 S. Michigan Ave., Chicago • 530 W. Sixth St., Los Angeles

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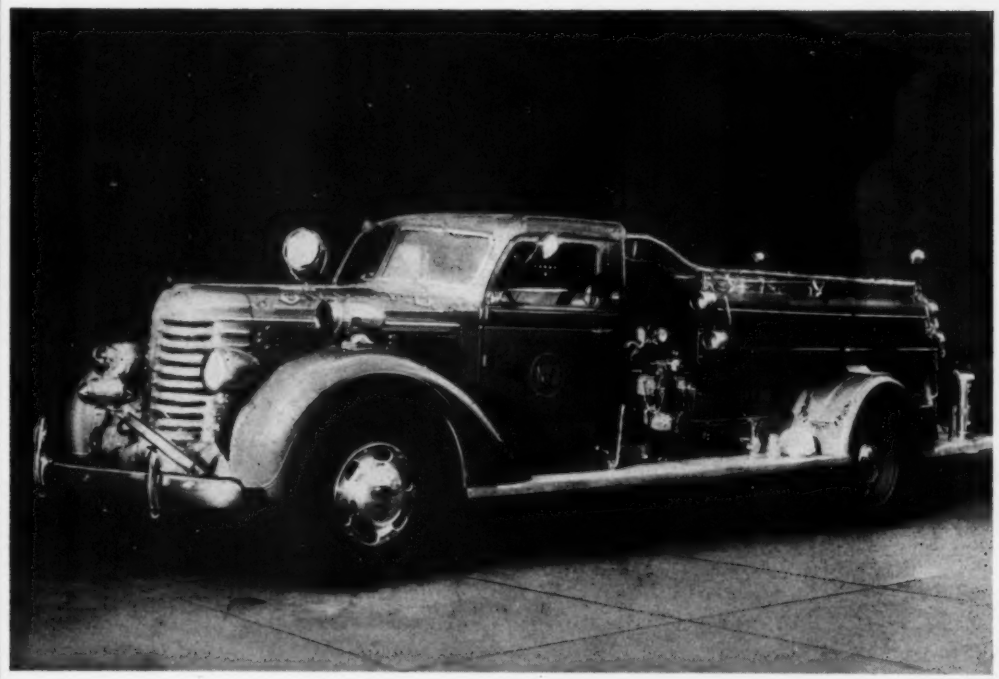
MACMILLAN RING-FREE MOTOR OIL

REDUCES WEAR BY REDUCING FRICTION

MODERNIZE WITH OREN



MANUFACTURED BY

OREN

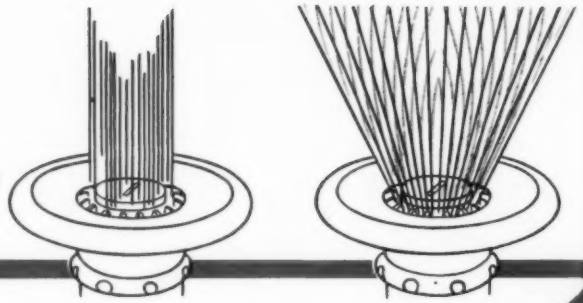
FIRE APPARATUS DIVISION

of Roanoke Welding & Equipment Co., Inc.
Roanoke Virginia

Established 1916

...—V...—

FROM SHUT OFF TO SOLID STREAM TO SOLID FOG···



and We Mean SOLID!

AN IMPORTANT new development in the famous Elkhart Mystery Nozzle—

A fog cone that is ***entirely filled*** by diverting the direction of part of the nozzle stream—through a series of scientifically bevelled Streamlined Teeth.

The Teeth are ***part*** of the outer barrel—integrally cast in.

NO MOVING PARTS ADDED

NO EXTRA WATERWAY REQUIRED

NO HOLES TO CLOG

NO INTERFERENCE WITH SOLID STREAM

Here is another mystifying achievement—simple and positive—by the creators of the revolutionary Mystery Nozzle.

ELKHART BRASS MANUFACTURING CO., INC.
ELKHART, INDIANA

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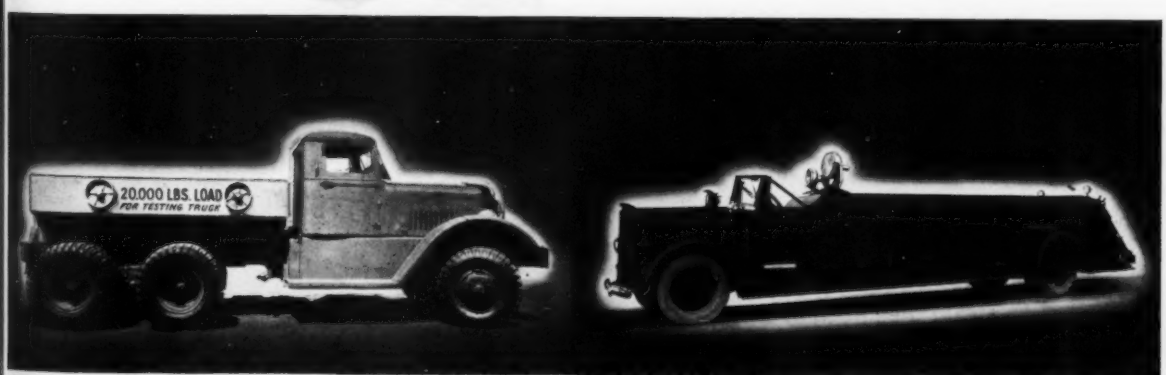
Finding Fault
is My Business

● As chief test driver, it's my job to test and make sure every Ward LaFrance special truck is *right* in every respect when it leaves our plant. Each one gets a workout of a hundred miles or more under full load. When my crew says "okay" we have mighty good reason to believe that each Ward LaFrance will more than live up to its name.

Individual testing of all Ward LaFrance special trucks is a good example of the *extra* care which has characterized Ward LaFrance custom-building practice for twenty-five years. Not only is each piece of Ward LaFrance fire-fighting equipment engineered and built to fit the exact requirements of the job it is to do — it is given exhaustive tests over a period of many hours to prove its ability to maintain volume and pressure in excess of what it will be called upon to deliver.

For maximum protection and dependability of operation, you need equipment designed and built the Ward LaFrance way. We invite you to consult our engineers regarding the specialized needs of your fire department.



Tank-Recovery Wrecker Unit, now in production for the Army, loaded with 20,000 lb. concrete block for its test run.

A Ward LaFrance Enclosed 500 Gallon Quadruple Ladder Truck for the Clifton, New Jersey Fire Department.

WARD LaFRANCE

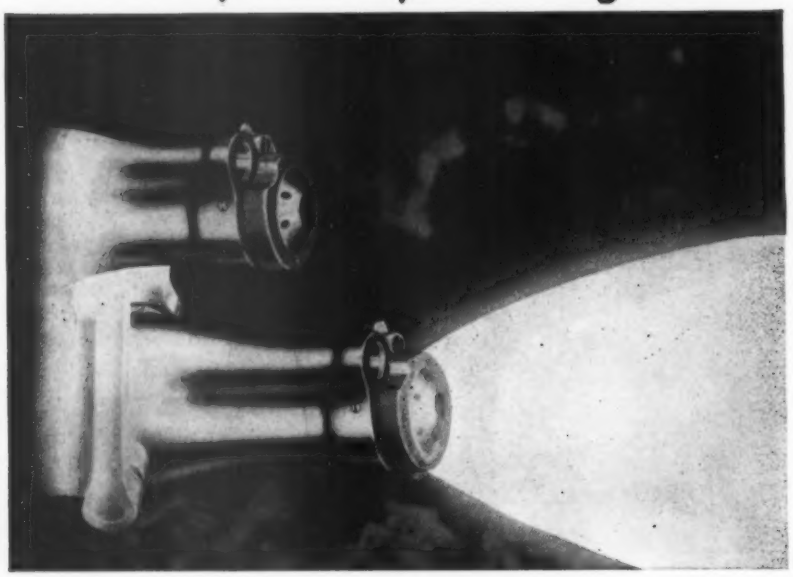
TRUCK GREAT AMERICAN INDUSTRIES INC. **DIVISION**

ELMIRA, N. Y.

© 1943 Great American Industries, Inc., Meriden, Conn.

WE "PULVERIZE" WATER

so it will put out your oil fires!



Flammable liquid fires are extinguished three ways . . . and WaterFOG — water in the form of extremely tiny particles — uses all three.

Cools the burning vapors. Prevents more vapors from rising. Shuts off oxygen. And without agitating the surface of the liquid!

WaterFOG is created by impinging streams of water from specially-designed Rockwood nozzles. Then it goes to work where water in stream or spray form would not be effective . . .

Cools the Fire. Water's speed of heat absorption increases with the surface area exposed. A given quantity of water in the form of thousands of tiny WaterFOG particles has many times the total surface area of ordinary-sized spray, so WaterFOG's *cooling* power is many times faster.

Blocks off Vapors. WaterFOG droplets are light . . . instead of plunging into the liquid, agitating it, they *float* into the combustion area, taking heat from the surface of the liquid, to prevent further vaporization.

Diminishes Oxygen Supply. Changing to steam, WaterFOG expands and envelops the fire in a *smothering* blanket.

"Flash-back" is prevented. Water damage is lessened. And WaterFOG is safe to use on electrical fires. Other advantages in Bulletin 123.

Rockwood WaterFOG is approved by Underwriters' Laboratories and Associated Factory Mutuals. Rockwood engineers will develop the proper particle size, fog pattern and velocity for your conditions. Fixed piping installations, hose nozzles and applicators — used by Navy, Coast Guard, hundreds of industrial plants.

Executives! A colored moving picture (16 mm.) showing tests of Rockwood WaterFOG is available.

ROCKWOOD SPRINKLER COMPANY
48 Harlow Street, Worcester, Mass.
Specialists in Fire Protection Engineering Equipment and Installation since 1907.

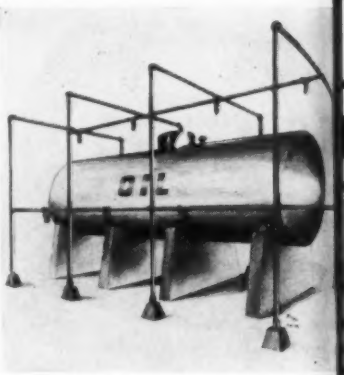
ROCKWOOD WaterFOG

Water Engineered by Rockwood Cools, Confines, Smothers Oil Fires

FIXED PIPING INSTALLATIO FOR EACH SPECIAL HAZA

Full protection against flamm liquid fires is obtained when a Wa FOG system of fixed piping, he valves and automatic control dev is planned and installed by Rockw engineers.

Skillful engineering assures compl WaterFOG extinguishment on fire fuel oil, kerosene, mineral spirits other flammable liquids. Rockwood gineers consider all factors involved each hazard, including spacing of Wa FOG heads, distance between he and hazard obstructions, etc.



This drawing shows a typical Wat FOG system engineered to protect oil storage tank efficiently. Complet automatic systems can be installed f instantaneous fire detection and qui extinguishment.

Portable WaterFOG unit, consisti of nozzle with applicator, is designed f service on regular fire hose lines, p jecting low-velocity WaterFOG in "ba shape. With the applicator removed a Fog tip inserted, medium veloc WaterFOG is discharged with consid able forward projection; or a s stream is also provided.

Wartime

FIRE-FIGHTING ...EVERY CHIEF KNOWS ITS ADDED RESPONSIBILITY

THE ever-present menace of fire assumes even greater importance and magnitude with the added threats of incendiaries . . . sabotage . . . air raids. Trained men and the most modern of fire fighting equipment are needed more than ever before to wipe out even the smallest "blaze" before it reaches big-area proportions.

Obsolete, antiquated fire apparatus can hardly be expected to meet the new demands for speed . . . power . . . traction . . . safety . . . dependability required in wartime fire fighting. Investigate modern FWD fire apparatus and its many advantages of four-wheel-drive power and performance in getting to fires faster—safer—under all conditions of road and weather.

FWD fire fighting trucks are built in a complete line—all types, all sizes with rotary or centrifugal pumpers in triple, or quadruple combinations in capacities of 500, 750, 1000 and 1250. They are backed by nationwide service facilities with replacement parts available at commercial vehicle prices.

THE FOUR WHEEL DRIVE AUTO COMPANY

Canadian Factory: Kitchener, Ontario

CLINTONVILLE WISCONSIN

VICTORY OVER FIRE IS IMPORTANT, *TOO*

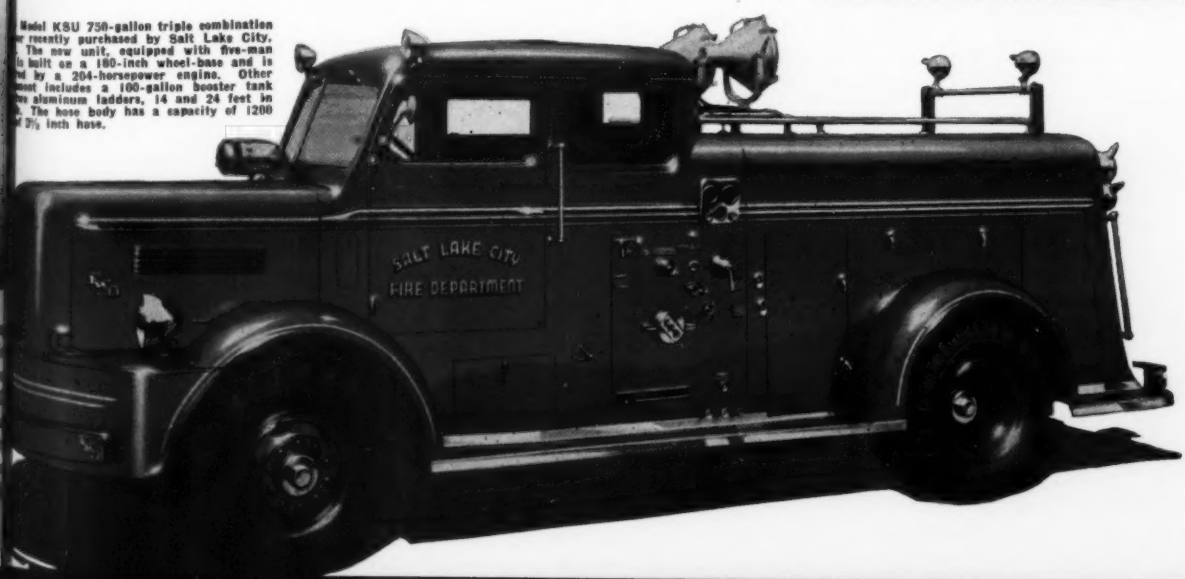
A number of serious fires have occurred in defense plants during the past year. Prevention of such fire damage is of the utmost importance to the defense effort. The purpose of the above poster, recently distributed by the Associated Factory Mutual Fire Insurance Companies to their insured industrial properties, is to call attention to fire's serious threat to production. Although emphasis is properly given to protecting plants against sabotage, the costly fires which have thus far occurred have been due to ordinary carelessness, inadequate employee training, or lack of necessary safeguards.—FIRE ENGINEERING, January, 1942.

FWD

FOUR WHEEL DRIVE

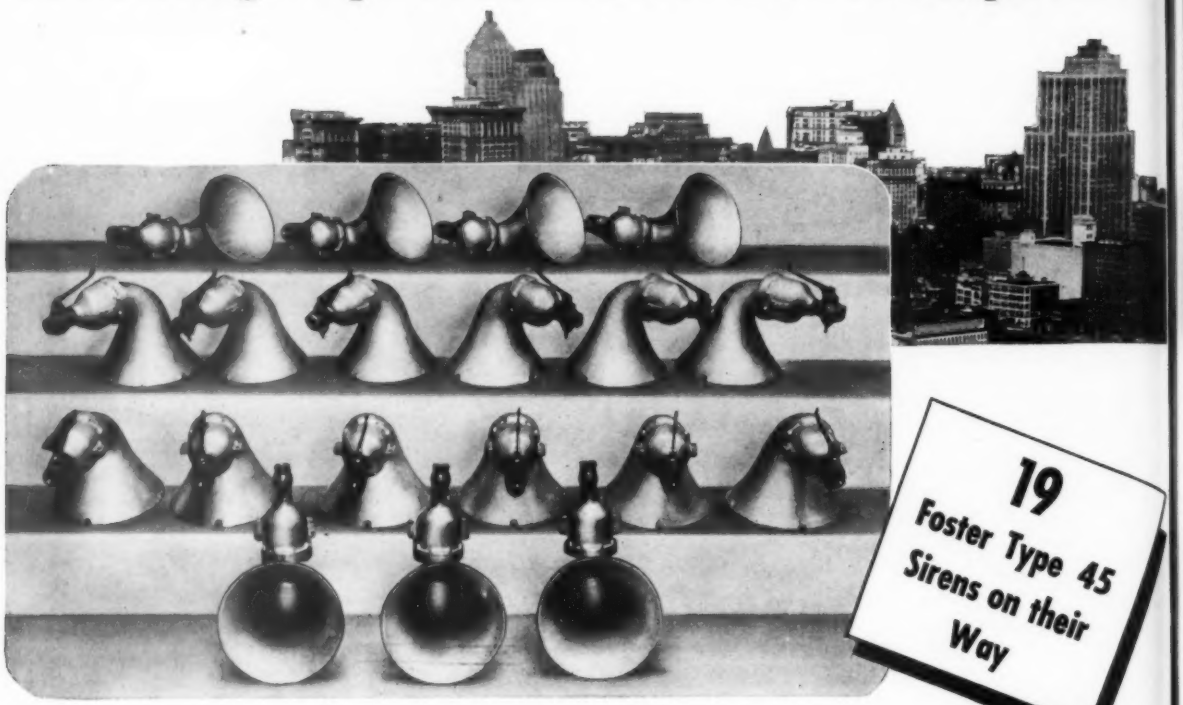
FIRE APPARATUS

***Built By the Oldest and Largest Four-Wheel-Drive Truck Manufacturer**



Model KSU 750-gallon triple combination ... recently purchased by Salt Lake City. The new unit, equipped with five-man ... is built on a 160-inch wheel-base and is ... by a 204-horsepower engine. Other ... includes a 100-gallon booster tank ... aluminum ladders, 14 and 24 feet in ... The hose body has a capacity of 1200 ... 2½ inch hose.

Here's *PROOF* that this Mid-West City's Warning System Will Be Adequate!



And these are no ordinary sirens—by impartial tests and in actual service, they have been found to have what it takes:

- **Audibility**—125 to 130 decibels at 100 ft. for Type 45—high enough to overcome a street level of 70 or 80 decibels with plenty to spare.
- **Adaptability** — Sharp sound cut-off permits coded signalling service. For operation on steam—or air, if a supply of approximately 1500 cubic feet per minute is available.
- **Availability**—Fewer critical materials are used in manufacture, therefore quick delivery can be made on lower priority.
- **Low Cost** — Comparative tests* show Foster Sirens lowest in cost per square mile covered over *any other* siren manufactured. Simple to install, and low in operating and maintenance costs thereafter.

*Test data furnished on request.

If you are looking for ways to bring your warning system to full efficiency, quickly and with the least possible expenditure, we can help. We have assisted many other cities in the solution of their problems, and with the proper survey data on your area, we can help you to plot your installations for maximum coverage. Our experience is yours for the asking—without obligation.

A fully descriptive and illustrated bulletin is available on request. Simply ask for Bulletin 29.

FOSTER ENGINEERING Company

PRESSURE REGULATORS...RELIEF AND BACK PRESSURE VALVES...AUTOMATIC STOP AND CHECK VALVES...ALTITUDE VALVES...DAMPER REGULATORS...FAN ENGINE REGULATORS...PUMP GOVERNORS...TEMPERATURE REGULATORS...LIQUID LEVEL CONTROLLERS...FLOAT AND LEVER BALANCED VALVES...NON-RETURN AND TRIPLE DUTY VALVES...VACUUM REGULATORS OR BREAKERS...SIGHT FLOW BOXES...STRAINERS...SAFETY VALVES...SIRENS

135 MONROE STREET • NEWARK, N. J.

A MILLION-

AND THEN SOME!

1,112,333 pieces of AKRON BRASS Fire Fighting Equipment made and delivered since Pearl Harbor.

Every item has gone for vital city protection —to guard ships on the seas—to fight fire on the allied battle fronts.

This total of AKRON BRASS products included:

580,591 Fire Hose Couplings
353,015 Nozzles and Allied Equipment
178,727 Wrenches, Tools and Miscellaneous

After the war has ended our productive facilities will again be entirely yours.

AKRON BRASS MFG. CO., INC.
WOOSTER, OHIO

Remember!

Only Akron Brass makes the GENUINE ROCKERLUG Fire Hose Couplings with these exclusive features:

HIGBEE THREAD
HIGBEE INDICATOR
TAPERED STILL THREADS

•

In brass or malleable iron—subject to limitation order 39

•

Don't Take Chances with Imitations

•

If it's ROCKERLUG —It's AKRON

AKRON BRASS

FIRE FIGHTING EQUIPMENT

FOR FIRE *"use the nearest box and wait for firemen"*

THESE INSTRUCTIONS, PROMPTLY FOLLOWED, WILL AVERT MANY FIRE DISASTERS

YOUR COMMUNITY SHOULD KNOW THAT annually—

600,000 fires occur,
10,000 human lives are lost, and
100,000 others are seriously injured thereby and that during the last year the

WAR EFFORT WAS IMPEDED

by the loss of sorely needed buildings, materials and appliances valued at more than $300,000,000.00 plus lives, indirect losses and delay upon which monetary values can not be placed.

THE FIRE ALARM BOX—

is the best means for sending an alarm of fire. Yet failure to Call the Fire Department promptly is unfortunately a part of the record of most disastrous fires.

• PUBLICIZE BOX LOCATIONS AND HOW TO USE THEM •

THE GAMEWELL COMPANY
Newton Upper Falls, Massachusetts

FIRE ENGINEERING

JULY, 1943 VOL. 96. NO. 7

With the Editor

Landis Urges Deferment of Firemen

At the annual conference of the Eastern Association of Fire Chiefs, held at Baltimore, Md., on June 25, James M. Landis, Director of the Office of Civilian Defense, stated that firemen should receive a selective service classification similar to that granted physicians.

Pointing out that the draft had seriously depleted the fire fighting forces, which now face great difficulty in obtaining replacements, Dean Landis added that the problem "has reached proportions which involve a real threat to the public in some of the critical war zones of this country."

"Firemen," Landis said, "have always been regarded as persons in essential industries by the Selective Service System. This, of course, never meant that they should be automatically deferred. It does mean, however, that in critical areas where dire hazards to war industries have increased abnormally, when manpower shortages are acute, firemen have an essential significance to this country."

It will be particularly gratifying to the fire service to know that Dean Landis has so clearly defined the importance of the professional fire service. With the help of his office, the matter can be brought very forcibly to the attention of those who have in their power the deferment or drafting of fire fighters.

We believe this stand on the part of the OCD will be applauded by the fire field, which has viewed with alarm the inroads into its trained personnel in the past two years by military demands and by the lure of better paying defense jobs.

If the fire service is to remain capable of meeting the growing responsibility placed upon it, its personnel must be protected; it is no longer possible to replace skilled fire fighters with men of satisfactory physical qualifications, for the Army and Navy are taking these very men.

We hope Dean Landis' efforts will bear early fruit.

Overzealous Juvenile Fire Fighters

Considerable turmoil has been caused in a Rhode Island town by the discovery that members of a juvenile fire fighting unit have been setting fires in order to have the opportunity of combatting them.

The sponsors of the juvenile fire fighting units have been saddled with the blame for what the youngsters have been doing, while the fire department disclaims all responsibility for the action of the youths.

While the experience of one department is no criterion of the value of juvenile fire fighting units, it does give food for thought.

If junior fire fighting organizations are to function in the way expected of them, they must be handled with a firm hand. Definite rules or codes of conduct must be provided, and any infraction of such regulations must be penalized promptly and vigorously.

Properly organized and controlled, juvenile fire fighters can be a great help to fire departments; and they can be made into effective units for the reduction of fire losses.

It is only necessary to review the fine work of the Boy Scouts, who have taken the course in firemanship, to reach the conclusion that properly controlled juvenile fire fighting units can do great good for the fire service.

Fred Shepperd

New England Fire Chiefs Hold Successful Convention

By ALTON BLACKINGTON

IN spite of wartime restrictions, blistering heat, scarcity of hotel accommodation and the absence of several important speakers, the 1943 conference of the New England Fire Chiefs Association at Rutland, Vermont, on June 22, 23, 24 will go down on the books as one of the most successful ever held—proving that nothing can prevent a bunch of Yankee fire chiefs from doing what they think is important.

The three day convention, packed with important business, was the first such meeting in two years; the 1942 conference being omitted on account of the war.

A few delegates came in their official cars, with the blessing of the O.P.A., while many others traveled long distances in hot trains without the benefit of air conditioning, only to find upon arrival that rooms reserved well in advance had suddenly been taken over by the War Department.

An ordinary host might have thrown in the sponge, but genial, popular Chief Koltonski, who had been host to the New England Association before, in 1930, tackled the all but unsolvable problem of finding suitable rooms, and with the assistance of James H. Lucas of the Rutland Chamber of Commerce, finally established the 338 members and guests in pleasant surroundings within walking distance of the convention headquarters in the Hotel Berwick and the Knights of Columbus Hall where all business meetings were held.

Although Vermont was never lovelier, and streams, mountains and golf courses beckoned, the chiefs rigidly obeyed the strict "no pleasure driving" ban, and remained close to the convention hall and headquarters. Attendance at meetings was 100%, and the subjects presented for discussion were of the highest educational nature.

Two of the principal speakers, Fred Shepperd, Headquarters Manager of the International Association, and Roi Wooley, Chief of Fire and Defense Coordinating Unit, O.C.D., Washington, were unable to be present on account of sudden illness. Anticipating that some speakers might not be able to be present because of wartime conditions, the program committee provided substitute lecturers, and the entire program went off without a hitch.

Memorial Services Held

The twenty-first annual convention opened with an impressive memorial service in the Strand Theatre for twenty-six members of the Association who have died since the last convention. Especially remembered was the late Chief Napoleon Taupier of Pawtucket, Rhode Island, a picturesque and popular chief who was killed when his car crashed while responding to an alarm.

Retiring President Chief William C. Mahoney of Peabody, Massachusetts, opened the conference and welcomed the members after an absence of two years, stating that it was highly desirable for the chiefs to get together at this time to discuss problems brought about by the war.

Invocation was given by Father Michael F. Collins, Chaplain of the New England Association.

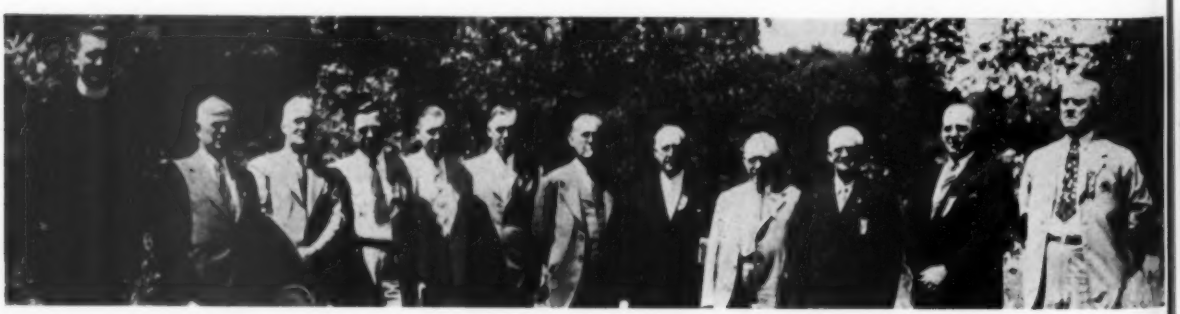
President Mahoney then presented Lieutenant Governor Mortimer R. Proctor of Vermont, who represented Governor William H. Wills, who was in the midwest attending the National Governors' Convention. The Lieutenant Governor paid the New England Chiefs a tribute for the work they are doing in maintaining safety and law and order and especially complimented Chief Koltonski for the active part he has played in Vermont's plan of fire protection and defense work.

Mayor Wayne Temple of Rutland and Oliver D. Ward of the Chamber of Commerce thanked the chiefs for bringing "real summer weather" and expressed their regrets that because of gas rationing it would not be possible to transport the visitors around Vermont.

The response to the addresses of welcome was ably given by Chief Stuart M. Potter of Greenwich, Conn., after which the roll call of deceased members was read by Secretary O'Hearn. "Taps" was sounded, and a mixed quartet from the Congregational Church sang "Abide With Me."

The principal memorial address was given by Rev. Frank W. Grippin of Trinity Episcopal Church, who referred to the work of the fire departments on the home front as a "fifth freedom—freedom from fire, injury and danger." The impressive service closed with benediction by Rev. John M. Kennedy, pastor of the Church of Christ the King. The use of the Strand Theatre was made possible through the generosity of Frank A. Vennett, entertainment chairman.

The first speaker at the conference held in the K. of C. Hall on Tuesday afternoon was Mr. T. Alfred Fleming of New York, Chief of Conservation for the National Board of Fire Underwriters, and in his characteristic manner held the attention of the big audience as he pleaded for more concentrated thought and effort for improved conditions in fire protection.



Newly Elected Officers of the New England Association

Left to right: Rev. Michael F. Collins, Marblehead, Mass., Chaplain; Chief Michael J. Shea, Fitchburg, Mass., Director; Chief Selden R. Allen, Brookline, Mass., New England Director to International Association of Fire Chiefs; Chief Joseph Scanlon, Lynn, Mass., Director; Chief Alfred Koltonski, Rutland, Vt.; Director; Chief Stuart Potter, Greenwich, Conn., Director; Chief John O'Hearn, Watertown, Mass., Secretary-Treasurer; Chief Michael Lawton, Middletown, Conn., President; Chief William Happny, Concord, N. H., First Vice President; Chief Allen Payson, Camden, Me., Second Vice-President; Chief Oliver T. Sanborn, Portland, Me., Director; and Chief A. J. Cote, Woonsocket, R. I., Director.

"New England leaders in fire work have never been surpassed," said Mr. Fleming, "but I wonder how many of you realize that every twenty-four hours more than one million dollars' worth of valuable war supplies is destroyed by fire—in war industries alone."

Snapped at the Conference Were Chief Allen F. Payson, Camden, Me., Newly Elected Second Vice-President, and Percy C. Charnock, State Fire Coordinator for Massachusetts

Mr. Fleming graphically described two fires in grain mills that consumed enough grain to furnish 600,000 soldiers with cereal for one year. Both fires caused by dust explosions that could have been prevented, he thought, and in each case the fire spread because of delayed alarms.

"I want to repeat," he said, "the grain lost in these fires would have given 600,000 American soldiers their breakfast food every day for a year. And the grain that was destroyed represented the work of 2,000 farmers who had cultivated 150,000 acres of land."

He described a defense plant in the middle west 348 feet wide by 500 feet long where plane casings were made. "There were no cut-offs, no sprinklers, and when magnesium caught fire, there was a loss of $2,350,000. "This concern," he went on, "was engaged in the manufacture of special appliances for fifteen other airplane factories, and as a result of the fire, twelve assembly lines in other defense plants were forced to shut down.

"We may get fire from the air," Mr. Fleming said, "and an occasional case of sabotage. These troubles I believe we can handle, but something must be done about carelessness in our national defense plants. We must stop these million dollar a day fires."

The speaker mentioned the $11,000,000 fire in Fall River, where valuable rubber was destroyed because a workman shut off the sprinklers.

He told of a waterfront fire where enough war goods were stored to supply a whole convoy. A small blaze in some straw in a stockyard was fought with extinguishers for twenty-eight minutes before the alarm was turned in. The result—$5,000,000 worth of food, supplies and ammunition destroyed.

"I know it is difficult for you New England chiefs to believe that such conditions exist, but they do," said Mr. Fleming. "I want to tell you about a big-shot who offered to bet me the finest dinner the Waldorf-Astoria could provide if I could find a single fire hazard in the new defense plant that he had completed. I took the bet and went out to look at it. It was a fine, well-equipped, one-story concrete building set in the middle of fifteen acres of land. It was 420 ft. wide, 510 ft. long, of sawtooth construction, with plenty of ventilation and first class wiring. There were extinguishers all over the place, but no sprinklers. The standpipes that should have been located handily to means of egress were in the center of the building, and there was no chance for men handling hose to have safety at their backs."

Noticing the many soda and acid extinguishers, Mr. Fleming inquired of the expert if he had ever heard of "foam" for fires in electrical installations. "I can't think of everything," his host replied.

A spray booth, which should have been located outside the main building where 4,000 men were to be employed, had been built of cement blocks with a light sheet iron cover at the top, was inside the factory.

When questioned as to the location of the nearest city box, and hydrant, as well as the name of the chief of the local department, the contractor professed complete ignorance. Mr. Fleming went outside and found that the nearest hydrant was 740 feet from the main building, and when he insisted on attaching a hose line to it, only a small stream was obtained.

The local chief, who had never been consulted about the construction of the new defense plant, said, "I could have told you that this pipeline is inadequate.

At the Rutland Convention

Top: The North Shore Delegation from Massachusetts. Center: The Koltonskis were grand hosts. Chief Alfred H. Koltonski with his wife and daughter (left) and his sister, Miss Helen Koltonski, who was hostess to the lady visitors. Bottom: The Greenwich, Conn., delegation. Left to right are Chief of Police and Mrs. John Gleason, Mr. and Mrs. Leon Meaney and Chief and Mrs. Stuart Potter.

It was put in many, many years ago, is only a four-inch pipe, probably filled with rust, and, besides that, it is a dead end. What you fellows need is an eight or ten-inch pipe with a circulating system."

"That," said Mr. Fleming, "is the story of a foolproof plant, with not a hazard in it!"

In conclusion, he stated that we are losing the battle against fire from three major causes: static electricity; improper electrical installations; vapors and dust explosions (and improper ventilation).

He warned against the static that is present in the human body, "250 volts in the average man," he said, "more when the man is active." He urged the installation of static floor covering, a material developed at the Massachusetts Institute of Technology for the prevention of static sparks around electrical installations.

"Dust explosions," he said, "could in many cases be prevented with a simple metal cone with its lip just touching the edge of moving belts, the cone to be grounded to a water pipe."

Static in newspaper plants and paper mills has been eliminated by the simple expedient of hanging thin strips of lead foil (Christmas tree decorations) from a grounded pipe, to catch the static charge of the fast-moving paper.

He urged that fire inspectors have a complete knowledge of the conditions of their plants; that industries have standard, efficient fire equipment, unrelenting inspections; trained employee personnel; and effective private fire brigades whose organization includes men from every department. "If our soldiers on the battlefront are compelled to retreat because of some tactical blunder, we should all be up in arms in criticism of our commanders, and they have the same right to criticize us if they are not supplied with materials of combat because of our neglect and carelessness."

Arson Sabotage Discussed

The second speaker on the Tuesday afternoon program was A. Cornelius, Jr., a special agent in charge of the F.B.I. office in Albany, New York, covering the Vermont Area.

A large part of Mr. Cornelius' remarks was "off the record," inasmuch as they dealt with wartime problems, arson and sabotage.

Speaking of non-military bombs, that might be planted with a view to the destruction of property, he recommended that so-called "experts" be called immediately, and cautioned the fire chiefs that areas where bombs are discovered should be cleared of the populace, a guard established around the area, and the handling of these bombs or infernal machines assigned to a competent explosives expert. He said the effects of a bomb could be minimized by surrounding it with mattresses or sand bags, directing the course of the explosion away from valuable machinery.

"Actually," he said, "there are no living bomb experts today. Those who knew the most about such things have been killed."

He outlined what the F.B.I. investigator will want to know from the fire chief when he arrives upon the scene where sabotage is suspected, and stated emphatically that there has been no evidence of organized sabotage in this country, and no evidence that sabotage discovered was of foreign inspiration.

"Ever increasing alertness on the part of the people of the United States is the determining factor in the defeat of sabotage," he said in conclusion.

The final speaker of the afternoon was Commissioner Raymond J. Kenney, Commonwealth of Massachusetts Department of Conservation. His subject, "Forest Fire Hazards in Massachusetts," was of especial interest to the New England chiefs following an epidemic of grass, brush and forest blazes a few weeks ago.

"There is a close connection between forest fires and the war effort," said Commissioner Kenney. "We read in the papers that there is a shortage of lumber, that ships are held in port for lack of lumber, that planes are grounded on air fields because of the dense smoke from nearby forest fires, that the sky-glow along our coastal areas at night makes it possible for enemy submarines to see our convoys."

There are three million acres of forest land in Massachusetts, and about one-third is an economic loss at the present time and cannot pay its fair share of taxes. This tax burden is redistributed on homes and buildings, and actually the people who are indifferent to their responsibility regarding forest fires are hit through their own pocketbooks when such fires occur.

"When a large tract of forest land is burned," he stated, "there is no way of determining the actual loss to the citizens. You can compute the loss of a home or a building, but when the forest burns, and valuable timber is destroyed, no one can compute the loss in dollars and cents that may accrue from the accompanying loss of wild life, water power and recreational areas."

Retiring President William H. Mahoney in a Characteristic Pose with His Inevitable Cigar

Specialized Equipment Necessary

Observation towers with short wave two-way radio communication, patrols and expert training have come into their own. "It is a mistake," Mr. Kenney said, "for anyone to assume that fire fighting in the field or forest is a chore for a few high school boys. It should be regarded as a highly specialized branch of work, and only the best and most modern equipment should be used."

On Tuesday evening, the chiefs and their wives and members of many civic and fraternal organizations gathered in the K. of C. auditorium to hear Alton H. Blackington of Boston tell some of his famous "Yankee Yarns." He accompanied his remarks with 3,000 feet of colored motion pictures of New England, including many spectacular fires. Mr. Blackington showed New England departments fighting fire in 20 below zero weather as well as battling the flames that "crowned" through the pine forests of Cape Cod, Groton, and Stoddard, New Hampshire. His pictures of salmon fishing at Moosehead Lake, Maine, yachting at Marblehead, winter sports atop the White Mountains, and the rugged scenery of Vermont, were greatly enjoyed by the delegates who could not visit these New England scenic spots because of gas rationing. Dancing followed the illustrated lecture.

The Wednesday morning session opened with M. Norcross Stratton of

(*Continued on page 392*)

Present at Rutland

Left: Chief Michael W. Lawton of Middletown, Conn., and Chief John W. O'Hearn, Watertown, Mass., newly elected President and Secretary-Treasurer respectively. Center: Chief and Mrs. William Happny, Concord, N. H., Jim Ryan, Rockwood Sprinkler Company, Worcester, Mass., and Everett Angier, The Gamewell Co., Newton Upper Falls, Mass. Right: A. G. Sullivan, General Sales Manager, Buffalo Fire Appliance Corp., Buffalo, N. Y., and J. H. Green, General Manager, Eureka Fire Hose Div., U. S. Rubber Co., New York.

Practical Training for Auxiliary Firemen

By FRED SHEPPERD
Editor, FIRE ENGINEERING

IN this installment of the series of articles on "Practical Training for Auxiliary Firemen" are discussed fire hose fittings.

Q. What is a play pipe holder?

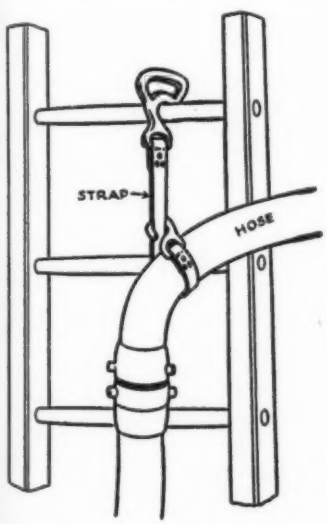
A. A play pipe holder is quite similar to the nozzle holder, but it is designed particularly for use with the long, open play pipe. Instead of the holder being attached to the hose, it is attached directly to the play pipe, and provides a secure footing by use of spiked legs, as with the nozzle holder.

Play Pipe Holder

Q. What is a turret nozzle (or deck gun)?

A. A turret nozzle is a swivel nozzle which may be mounted on a piece of fire apparatus to provide a large stream under high pressures.

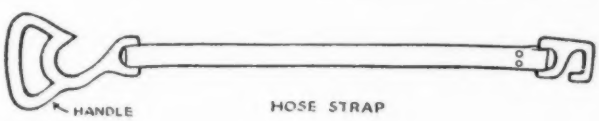
These guns usually have a horizontal range of 360 degrees (a complete circle), or may be directed to an angle of 180 degrees vertically. Thus complete coverage above the horizontal may be secured. They are usually fitted with control wheels to facilitate operation. When once set in one direction, they remain in such direction until changed by the operator. When mounted on apparatus, they are provided with siamese inlet connections to provide means for supplying water. When mounted on pumpers, they have by-pass connections to the pump, so that they may be supplied directly by the pumper.



Hose Strap in Position

Q. What is a hose strap, and for what purpose is it used?

A. A hose strap, like the hose chain, is used for carrying hose lines up ladders, for securing hose lines to fire escapes and ladders, and for assisting in handling lines in other manners. With the type of hose strap shown, it is quite a simple matter to secure a line of hose on a ladder or fire escape. It is only necessary to pass the strap around the hose, place the hook of the strap over the strap, and then place the handle hook over the rung of the ladder or over the railing of a fire escape. The handle, too, provides a very effective means for maneuvering the hose line.



Q. What is a spanner (spanner wrench)?

A. A spanner is a tool for tightening the connections on fire hose couplings. When a line of hose is first coupled up, the coupling may be made by hand. If it is desired to tighten the coupling beyond the limitations of hand manipulation, a spanner is used. Many types of spanners may be found in the fire service. Some are designed for pin lug couplings only, while others are designed for either pin lug or rocker lug couplings.

In breaking hose lines the use of a spanner is necessary.

Some spanners are provided with a wrench socket for opening the valve on the hydrant.

Q. What is a hose chain and for what purpose is it used?

A. A hose chain consists of a loop of chain to which is attached a metal handle with a hook thereon.

The hose chain is used for securing the hose line in place on a ladder or other point of vantage. The chain is looped about the hose as indicated in the illustration, and the hook on the handle is placed on the rung of a ladder or on other support.

Hose Chain

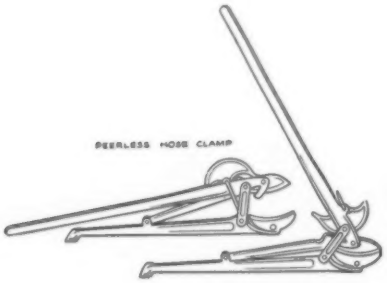
In taking a hose line up a ladder, or up another elevation, the hose chain is very helpful, providing a "handle" for the fireman to move the hose.

Q. What is a hose clamp, and what is its purpose?

A. A hose clamp is a device used for shutting off a line of hose. It may produce its effect by folding a hose over on itself to shut off the flow of water, or compressing the hose to stop the flow.

Q. Describe the Peerless hose clamp.

A. The Peerless hose clamp is a lever-type of hose clamp as shown in the illustration. The hose is placed between the jaws of the

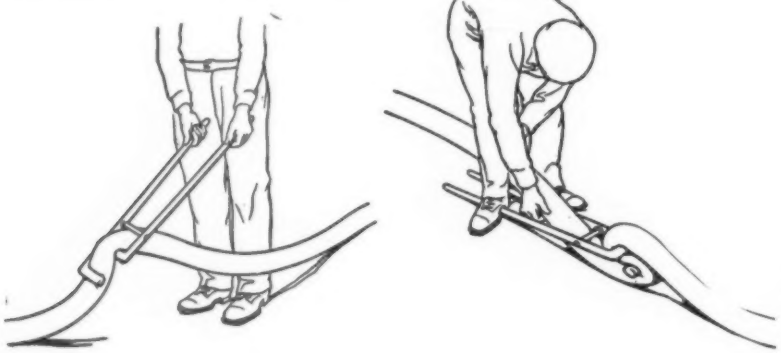


clamp, while the movable handle is in lower position. Then the handle is raised, and the hose is firmly clamped between the jaws.

Q. What other types of hose clamps are there, and how do they function?

A. The La-France hose clamp stops the flow of water by folding the hose over on itself, as shown in the illustration. When in the shut-off position, the clamp is locked in position by a bar between the two parallel handles.

The Pirsch hose clamp works in a manner similar to the Peerless.



LaFrance Hose Clamp

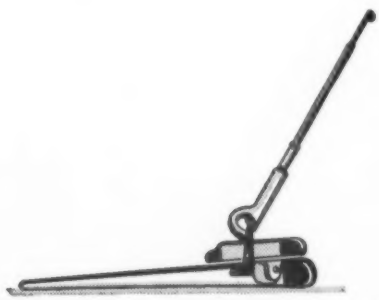
When the handle is in a horizontal position, the jaws of the shut-off are open. The hose is placed between the jaws and the handle raised until the flow of water is stopped.

Several other types of hose clamps are on the market, employing the screw principle for providing the compression for shutting off the flow of water. In one of them the device is placed over the line of hose, and the upper half is snapped to the lower half; then the screw handle is employed to provide the pressure.

Hose clamps are commonly employed for shutting off the flow of water, when a section bursts, or when it is necessary to make a change in the layout, without shutting off the line at the engine.

Q. What is a dewatering siphon?

A. A dewatering siphon is a device used for removing water from cellars after fires. Formerly old fire engines were employed for this service, due to the danger of ruining the pump by foreign material entering the suction, such as grit, cinders, etc. The siphon may be operated from hydraulic pressure or from pumper pressure, but none of the water removed from the basement passes through the pump.



Pirsch Hose Clamp

Q. How does the siphon work?

A. The siphon works on the ejector principle, water from the hydrant or other source of supply under pressure being forced through the ejector and carrying with it water from the suction line which is fed by the water to be removed from the basement, or other point. As indicated in the diagram, the water from the pressure source passes into the siphon and directs the stream vertically through the neck of the siphon. A vacuum is created by this stream, and water is thereby drawn from basement through the bottom of the siphon, and mixes with water from the jet in the neck of the siphon. It is carried out through one or two branch lines attached to the discharge outlets on the top of the siphon.

Q. How high may water be lifted by a siphon?

A. A lift of eighty feet has been

Dewatering Siphon

produced by a siphon where the pressure from the pumper was around 200 pounds. With this lift, the efficiency of the siphon is very low.

Where the lift is small, for example around ten to fifteen feet, the siphon may be expected to discharge four gallons of water from the basement for each gallon fed to the siphon by the pumper or hydrant. At high lifts, the amount of water removed from the basement will be approximately equal to that removed per minute through the jet supplied by the pumper.

Q. What is a burst hose jacket?

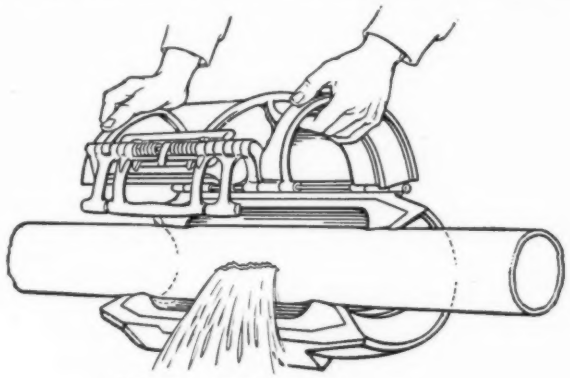
A. A burst hose jacket is a jacket which is placed over a hose line where rupture of the hose has occurred, to prevent escape of water and thus to maintain the pressure within the hose.

Q. What types of hose jackets are commonly used, and how are they employed?

A. Four types of hose jackets are found in the fire service, namely, the Cooper hose jacket, the screw type jacket, the Neeley hose jacket and the leather jacket.

The Cooper hose jacket is so placed over the tear in the hose that the water will be shooting out away from the operator, and as nearly horizontal as possible. Then

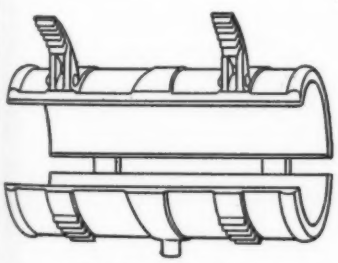
the hose jacket is opened and one side slipped under the hose. When ready, the upper part of the jacket



COOPER HOSE JACKET

is snapped closed quickly, preferably with the foot. It locks automatically. If the tear in the hose were so placed that the stream shot up vertically, there might be danger of the upper part of the jacket being knocked upward as it was being closed, and possibly injuring the operator.

The screw type hose jacket is slipped over the hose to either side of the tear, and then closed in position and slipped over the tear. When in position, wing nut enables the operator to tighten the jacket and stop the leak.



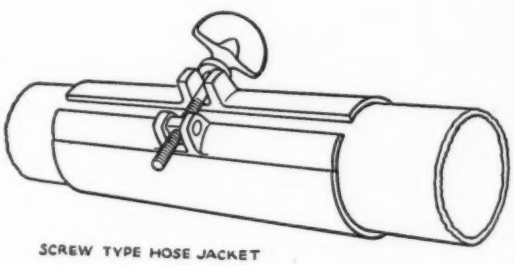
NEELEY HOSE JACKET

The Neely hose jacket functions in somewhat the same manner as the Cooper jacket, but in this device two hinged toothed fingers

Leather Hose Jacket

grip corresponding teeth on the other side of the jacket, and make the stop secure.

The leather hose jacket is nothing more than a short sleeve, open at one side and provided with four straps. It is slipped over the hose on either side of the tear, and



SCREW TYPE HOSE JACKET

the straps fastened loosely. The jacket is then slid over the tear and the straps tightened up.

Q. What is a hose pole, and for what purpose is it used?

A. A hose pole is an adaptation of the 10 or 12-foot hook, although in some departments a specially constructed hose pole is used. In the case of the former, a metal cap is attached to the tip of the pole, and to this cap is fastened a chain or strap with a snap hook on the end. Where hose poles are specially made, they consist of a 12-foot pole with a plain hook on one end and a leather strap with a snap hook on the other. This device is employed to send hose up the face of a building, or up a fire escape. It is much faster to send a line of hose up by this method than by snaking it up around the fire escape stairways. To send up a line by a hose pole, the strap or chain on the end of the pole is fastened around the coupling on the end of the line, and the hook end of the hose pole is handed up to the man stationed on the first fire escape landing, who takes the pole and sends it up hand over hand to the balcony above where it is grasped by another man who repeats the performance. After the hose pole passes a man, he works the hose up hand over hand to lighten up. In this way the hose line is sent up as fast as the men can send the pole up hand-over-hand.

Q. What is a hose rope, and for what purpose is it used?

A. A hose rope consists of a loop of rope, to which is attached a hook. It may be used in the same manner as a hose strap or hose chain, or for any of the following purposes: as a safety belt by a fireman on a ladder, as an emergency life belt for carrying an unconscious person down a ladder, as a support for ladder placement at a building, or for securing a nozzle to some support.

Hose Rope

HOSE POLE

Q. What is a hose hoist?

A. A hose hoist is a roller used to protect hose where it crosses cornices or other sharp projections.

(*Continued on page 397*)

NAVAL DISTRICT CONDUCTS TRAINING SCHOOL FOR FIREMEN

Security Office of Eleventh Naval Training District Establishes Training School at Marine Corps Base

By M. T. Sgt. George H. Schreder
U. S. Marine Corps

THE Commandant of the Eleventh Naval District realizing that there is as much difference between a man with a hose, and a trained fireman, as there is between a man with a gun and a trained soldier, requested that the Security Office of the Eleventh Naval District organize a training program to train service personnel manning fire stations at the various activities in the District.

Master Technical Sergeant George H. Schreder, formerly Chief of the Marine Corps Base Fire Department, was temporarily attached to the Security Office to assist in the organizing of the training program.

It was at first decided to have Sgt. Schreder visit the various activities and train the personnel at their stations. Commander H. H. Ritter, District Security Officer, U. S. N. (Ret.), and Lieut. S. O. Roppe, U. S. N. R., Executive Officer of the Security Office, and a Fire Prevention Engineer on military leave from the San Diego Fire Department, decided that more could be accomplished if part of a station's personnel could be brought to a central location for school and training. It was evident that by this method crews from several stations could be trained at one time. Because the Marine Corps Base has had a training program in operation for the past 2½ years and also has a training tower located there, it was realized that the Base would be an ideal place to locate the District Fire School. Commander Ritter requested permission of the Commanding General, Marine Corps Base, to establish the school there. The request was granted.

Official U. S. Marine Corps Photo

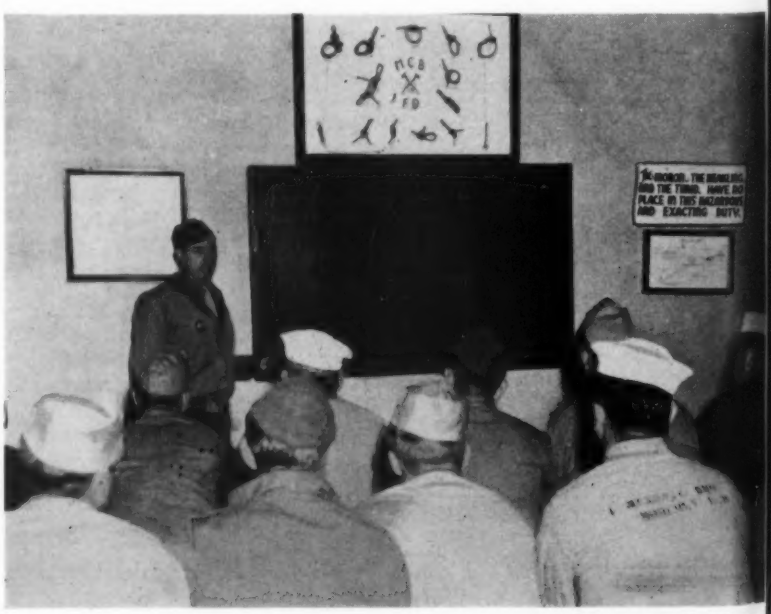
Scenes at the Fire Department Training School

Left: Rescue from third floor using a double bowline and forty-foot ladder. Right: Staff Sgt Winkelman and Sgt. Horner instruct a class in knot tieing.

Instructors at the school are M. T. Sgt. George H. Schreder, U. S. M. C. Staff Sgt. Arthur Winkleman, U. S. M. C. R., Staff Sgt. Arthur Dieckelman, U. S. M. C. R. and Sgt. Paul Horner, U. S. M. C. R.

The writer, having attended a number of fire department drill schools, is of the opinion that Winkleman has developed into one of the best drill instructors in the game. He is a member of the Western Springs, Illinois, Fire Department and was a member of the Ninth Battalion M. C. Reserve called to active duty in November, 1940. The writer had the honor of being Captain of the drill team of which Winkleman was a member when the team captured first place for departments in their class in the first fire show held by the National Board of Fire Underwriters at Soldier's Field in Chicago in 1937. The five members of the team were awarded $550.00 prize money and each member received a gold medal presented by Mayor Kelly of Chicago. Staff Sgt. Winkleman has been drillmaster of the Marine Corps Base Fire Department for the past 2½ years and has trained some 400 marines as firemen during that time. Sgt. Horner joined the department when it was formed and has been a very able assistant to Winkleman. Staff Sgt. Arthur Dieckelman also joined the department when it was first formed and because his civilian background was of a mechanical nature he has been Chief Engineer of the Marine Corps Base Department for the past two years. Dieckelman is quite farsighted and has developed a number of small tools now in use by the department besides having charge of all repairs of the motorized equipment of the department. Dieckelman's part in the instruction at the new fire school has to do with the mechanical part of the training. An intensive program has been laid out and attendance at the school is for five weeks.

Personnel at stations some distance from the Marine Corps Base are sta



Official U. S. Marine Corps Photo

M. T. Sgt. Schreder Instructing Class in Hydraulics

tioned at the Base for the five weeks' school period. Members of departments which are not too far distant from the school commute to the school, returning to their own stations in the evening.

Subjects Taught

Some of the subjects taught at the school are—

Fire hose, care of, injuries to, types, sizes, couplings, importance of the care of fire hose, various folds, rolls and carries, etc.

Study of fire department ladders, their construction, their use and importance to the fire service. The carries and raises of all the types and sizes of ladders in use by the Military Departments in the entire Eleventh Naval District.

Study of forceful entry and small tools operations, their uses and care, etc.

Knots in the fire service. (Members must be able to tie in the dark the twelve knots that are taught.)

Minor extinguishments, the uses of types in use and nomenclature of extinguishers in use in the District. The second part of the study is given to use of the various extinguishers on actual fires.

Rescue evolutions. Considerable time is spent on this subject as in the event of any military action here on the Coast we realize the fire department will be called on to do a lot of this type of work.

Operations on the drill tower are carried out with both charged and uncharged lines.

Salvage and overhaul practices. The various folds for salvage covers and overhaul operations, etc.

Ventilation. The why and wherefore and the when and where problems are given in certain buildings and the student uses chalk to mark where he would ventilate and why. Most of this work is done in the class room by use of the blackboard.

Inspections. This subject is covered thoroughly and students are sent into buildings where fire hazards have been arranged for them. They make a list of the hazards which they find and the instructor checks and corrects their reports.

Simple Hydraulics. Fire streams relaying water, etc., and the operation of various types of fire pumps, rotary, centrifugal, defense pumps, and high pressure apparatus in use in the District.

The chemistry of fire is studied. Spontaneous ignition, transmittance of heat by conduction, convection and radiation. Training films are obtained from the Eleventh Naval District's large library and are shown from time to time during the school to facilitate the training.

The first class is now in training and consists of members of the Fire Departments of a Naval establishment and three Marine Corps establishments.

Diploma Received on Completion of Course

Upon completion of the course the members will be given a diploma showing their participation in the school. Suitable entries will be made in their Service Record Books. This is good practice as wherever the man goes his Record Book goes with him and he can be used in the capacity of a fireman.

The school has adopted a motto of sorts—"Every member an Instructor."

Text books in use at the school are The Fire Chief's Handbook, Fire Service Hydraulics, Fireman's Training Course from Oklahoma A. & M. College, Fireman's Training Course from the University of Maryland, both Basic and the Advanced. In addition drills and evolutions are used from the Chicago Fire Department, Minneapolis Fire Department and the San Diego Fire Department.

Valuable aid has been rendered the school by Chief Harry Lockwood, M. T. Sgt., U. S. M. C. R., who succeeded the writer as Chief of the Marine Corps Base Fire Department. Lockwood has put himself and his department at the disposal of the school to help assure its success.

Official U. S. Navy Photo

Wool Felt Aids Navy Chemical Warfare Fighters

This Martian-like man is a U. S. sailor, fully prepared to fight poison gas and remove it from any object with which it may have been in contact; also doing it without harm to himself. The filtering and neutralizing mechanisms in the mask are of wool felt.

Fireboat Battles Flames

A fireboat (left) throws two big streams of water on fire, the night of May 30, at the Johnson Manufacturing Company, Seattle, Wash., one of three industrial plants razed by flames.

Prisoners Maintain Forestry Camps

California's San Quentin and Folsom prisons will furnish the manpower for ten forestry camps this summer, it was announced in San Francisco recently by Judge Isaac Pacht, president of the State Board of Prison Directors.

Two of the camps located in Riverside and San Diego counties in the southern part of the state are already operating and a third is being established in the Klamath National Forest near Hilt, on the California-Oregon border. Others will follow as quickly as arrangements can be made.

"These camps will replace the loss of local fire labor," said the judge, "and will be a source of trained fire fighters for both the initial attack on fires and as a reservoir of manpower for use wherever needed.

The U. S. Forestry Service will finance the mobilization to protect vital timber areas and the prisoners will be paid $12 per month with a $3 bonus if their work is satisfactory for a 6-day, 48-hour week.

Camps scheduled to be opened will be located at Cinnabar Springs in the Klamath forest near Hilt; at Hazel Green in Stanislaus forest near Groveland; at Ball Mountain access road in Shasta Forest, near Yreka; at Hackamore in Modoc Forest, near Alturas; in Lassen forest near Susanville; at Humbug Valley in Pluma Forest, near Almanor, and at Big Bar in Pluma Forest near Oroville.

BOB GREENOCK.

SAN FRANCISCO AUXILIARIES HOLD PARADE AND COMPETITION

City's Auxiliary Equipment Reviewed in Parade; Companies of Auxiliary Firemen Compete for Trophy

By Bob Greenock

MORE than 1,000 San Francisco auxiliary firemen and 150 self-propelled and trailer pump units participated in a parade last May which preceded the finals in a citywide auxiliary pumping contest held in Civic Center to determine the city's "champion" auxiliary fire company.

Participating in the final competition were eleven companies of auxiliary firemen, each of whom had defeated all comers in their respective eleven battalion districts.

Already possessors of the eleven district trophies donated by Laurent Lamanet, San Francisco fire fan and insurance broker, the eleven companies battled for the Grand Award trophy, emblematic of city championship, and the second place cup while thousands of citizens watched and cheered them on.

Winners of the Grand Award, also presented by Mr. Lamanet, were members of the auxiliary crew representing Engine 7 in District 6. Runners-up for the city championship and winners of the cup donated by Granat Brothers, local jewelry house, was the crew of Engine 38, District 9.

Members of the winning crew were Herb Gute, George Garris, Charles Cunningham, Don Lustenberger, Wayne White, Harvey Whiteside and Elmer Johnson. Second place winners were William McGrath, K. T. MacElwee, William Fulmer, Henry Ute, Ben Castro, L. E. Chirone and C. E. Scanlon.

Evolutions Conducted

The final competition consisted of going to suction in a cistern, leading out 100 feet of 2½-inch line (with tip) from one outlet, and two 1½-inch 100-foot lines from a 50-foot section of 2½-inch hose from another outlet, and charging the lines.

The winners completed the evolution in what Chief Albert J. Sullivan said was the "amazing time" of one minute, seven and four-tenth seconds, while the runners-up were only eight-tenths of a second slower.

Judges in the contest were Chief Sullivan, Battalion Chief George F. Schaefer, Captain William F. Murray and a fire lieutenant from each battalion.

Chief Schaefer and Captain Murray have been in charge of the auxiliary fire forces for San Francisco and they arranged the competition to stimulate interest in the auxiliary fire department, a most important branch of civilian defense.

The city now has 459 pieces of auxiliary equipment in service, all 500-gall pumps, including 316 trailer type pump 90 mounted on White Horse type tra (such as are used by laundries and ba eries) and 53 mounted on conventio type 1½-ton trucks.

Ultimate goal is 600 pieces, as ma of them self-powered as is possible. T that end the city has just acquired number of small Army trucks, co demned as "obsolete" in the sense th they are more than three or four yea old. All are serviceable and many ca completely equipped with tires.

Superintendent Harold Jones of th Fire Department Shops and his crew are mounting the pumps on trucks a fast as possible. The trailers from whic the pumps are removed will be used fo other civilian defense work.

Scenes at the Competition

Upper: Parade of auxiliary fire apparatus passes San Francisco's City Hall before final competition begins. Center: One of the auxiliary crews, a district winner, in the final competition held in the Civic Center. Lower: San Francisco Fire Chief Albert J. Sullivan presents the grand award trophy to Auxiliary Fireman George Garris of Engine 7 after finals had been run off. To his right are Lieutenant Benton Huden, who coached the winning crew, and Captain William Murray, one of the fire department officers in in charge of all auxiliaries

Chief Albert Sullivan and Fire Buff Laurent Lamanet with the Eleven District Cups, Won by Competing Teams, and the Grand Award

Meanwhile, the city has built a number of auxiliary firehouses on city property, in parks and schoolyards. Auxiliary equipment is stationed in these strategic locations as well as in firehouses and the city is now seeking use of private property for the duration to insure complete strategic distribution of apartus throughout the city.

A number of locations have already been obtained through cooperation of gasoline service station owners and large chain grocery stores which have hard-surfaced parking facilities adjacent to city thoroughfares.

Belltown Fire Department Celebrates Fifteenth Anniversary

The Belltown Fire Department of Stamford, Conn., recently celebrated its fifteenth anniversary with a display of its regular and emergency equipment.

Numbers 1 and 2 engines shown in the center of the photo are regular equipment. All other equipment was built by the members or loaned to the department for the duration by residents of the fire district. Some trailers were formerly used for camping purposes, but members added ladders and holders for axes, shovels, back-pack pump tanks, etc., and they quickly took on the appearance of emergency equipment. This equipment can be used for fighting grass fires or for fires which might be caused by air raids or large conflagrations which might require coverage by streets due to sparks.

All special equipment is housed in neighborhood fire stations where regular volunteer members are assigned to report during blackouts and during any possible air raids. Each neighborhood has an acting officer with three firemen and from two to three auxiliary firemen. Also assigned to each neighborhood are one or two members of the Junior Emergency Patrol, youngsters of from 12 to 16 years of age, who act as messengers and who during the daytime help at grass fires or as messengers with equipment at regular fires due to shortage of daytime firemen. During daytime hours, three of the stations have from five to six women who are women auxiliary firemen, with one male officer in charge. Each set of two emergency stations are covered by one of the regular captains or lieutenants of the department. The chief and assistant chief remain at the fire house and roll with No. 1 engine which remains there, or go by car to any other danger spot.

The neighborhood fire stations are connected by telephones in private homes where they are housed. Reports from air raid wardens go to the fire station, which is a sub-report center. Small fire calls are relayed from there to emergency stations in the various neighborhoods. Five of the older members of the department handle the telephones, using one for all incoming calls and one for out-going calls. Two other emergency telephones are also available nearby for an overflow of calls, or if the fire house is destroyed during a bombing raid.

The cost to the department for all the "blitz" equipment did not amount to over $250.00, including the purchase of two trucks. A bingo party was held, which raised $375.00, while all the painting was done by members of the department, as well as mechanical repairs and carpentry. OCD tanks are on each piece of apparatus so that the entire amount assigned to the district can be rolled to one part of the district in a few minutes. It is also available for grass and brush fires and has already been used for the larger ones during the Spring. One of the pieces of auxiliary equipment has the OCD skid pump with the equipment distributed thus far by the Federal government.

Although the Belltown district is almost entirely residential, it is within a few hundred yards of war plants, with the Boston Post Road, Merritt Parkway, New York, New Haven and Hartford Main line and other vital roads of communication within two miles.

The Belltown Fire Department is a volunteer fire department, headed by Chief John Moehring. At present it has fifty active firemen, with twenty-three in addition who are in the service.

Ammunition Train Shells Town

Grand Junction, Col., on June 28 had a sample of artillery attack, when a fire, caused apparently by sparks from a defective brake, set fire to one car of a freight train which was pulling into the city about 2 a. m. Included in the train were several cars carrying war munitions.

When the fire was discovered, railroad men cut off two cars, and ran them on to a siding about half a mile west of the depot, near the warehouse and lumber yard district. When the fire reached the contents of the cars, a four-hour bombardment was set off, and the city was showered with shrapnel, high powered shells and other missiles.

Fire Chief Charles Downing's right arm, torn by shell fragments, had to be amputated. A number of other persons were struck by shells and fragments.

Although nearby buildings escaped fire damage, roofs and walls were riddled. Demolition crews disposed of shells which had landed without exploding. The area was placed under military guard until the cleaning up process was completed.

Fire Damages School

An after-school fire did $7,500 damage recently to the Lincoln Grammar School in San Francisco and caused injuries to three firemen during the two-alarm blaze.

The fire destroyed part of the roof and inner wall supports of the school, located at Fifth and Harrison Streets. Fire Captain Cornelius Sullivan, on his way home from the department's drill school, noticed the fire and sounded the alarm.

BOB GREENOCK.

Regular and Emergency Apparatus of the Belltown Fire Department

Delegates at the 1943 Session of the North Carolina Fire College and Drill School

About 350 were in attendance at the annual fire college and drill school held at the Palmer Drill School in Charlotte, N. C., on May 25 to 27, under the auspices of the North Carolina Firemen's Association. Chief W. H. Palmer was host to the meeting.

Berkeley Gazette Warehouse Destroyed by Fire

A late afternoon fire which raged through the warehouse of the Berkeley Gazette at 2043 Allston Way, Berkeley, Calif., did damage estimated at $100,000 and gave all of Berkeley's fourteen fire companies a tough battle.

Walter Standart, a mail clerk, told fire officials he passed through the warehouse en route to the nearby post office about 5:30 p. m. and that everything seemed to be all right. When he returned five minutes later, the warehouse was a mass of flames.

He pulled Box 3251 at Harold Way and Allston at 5:36 p. m., bringing in Engines 2 and 4, Water Wagon 1, Truck 2 and Chief William Meinheit. Chief Meinheit ordered a second alarm at 5:38 and a third at 5:43.

Engines 3 and 6, Hose Wagons 5 and 8, and Truck 1 responded on the second alarm, while Engine 1, Hose Wagons 7 and 9, Water Wagon 2 and Squad 1 responded on the third alarm. The third alarm left no companies in service and the city was entirely stripped of apparatus with the exception of several reserve hose wagons, a water wagon and auxiliary equipment.

Chief Meinheit asked the Oakland Fire Department to assign companies to cover in. The request was made at 5:47 p. m. and at 5:58 Engines 8 and 18 of the Oakland Fire Department reported in service in the quarters of Berkeley Engine 2, Durant and Shattuck Avenue. One minute later, both Oakland companies responded to Box 2526 at Jefferson and Allston, where they extinguished a small fire hastily and with little loss. Meanwhile, the Oakland department stood by, ready to dispatch more apparatus, either to fill in or to take in one or both of the fires.

Two Berkeley fire department lieutenants, Eugene Roark and Chester Moller, were injured during the warehouse blaze which destroyed 300 tons of newsprint, type metal and other newspaper supplies.

The Elks Building and five other nearby structures were damaged and one auto burned in an adjoining parking lot.

Auxiliary firemen aided the Berkeley department in fighting the blaze, which was not completely extinguished for four hours.

Berkeley, located in what is known as the East Bay section bordering San Francisco Bay, has mutual aid agreements with contiguous cities.

BOB GREENOCK.

Fire Chiefs Visit Dean Landis

A delegation of the International Association of Fire Chiefs recently called on Dean James M. Landis, Director of the Office of Civilian Defense in Washington, D. C. Seated are Dean Landis and Chief Andrew T. Callahan, Harrison, N. J., President of the I. A. F. C. In back are Chief Daniel B. Tierney, Arlington, Mass., Secretary-Treasurer; Fred Shepperd, Headquarters Manager and ex-Chief George Mitchell, of East Orange, N. J., Treasurer of the Eastern Association of Fire Chiefs.

Thomas Elected President of the National Board

John M. Thomas, President of the National Union Fire Insurance Company, Pittsburgh, was elevated to the Presidency of the National Board of Fire Underwriters, at its 77th annual meeting on May 27 at the Waldorf-Astoria. He succeeds Robert P. Barbour, United States Manager of the Northern Assurance Company, who served two years as President.

Frank A. Christensen, Vice-President of the Fidelity-Phenix Fire Insurance Company, New York, was elected Vice-President of the Board to succeed Mr. Thomas. Mr. Christensen has been Chairman of the Executive Committee for the past two years.

Other officers were reelected as follows: Secretary, Peter J. Berry, President, Security Insurance Company, New Haven, Connecticut; Treasurer, B. M. Culver, President, Continental Insurance Company, New York; General Manager, W. E. Mallalieu; and Assistant General Managers, Charles H. Lum and F. S. Dauwalter.

Five members elected to the Executive Committee to serve three-year terms are: Ronald R. Martin, United States Manager, Atlas Insurance Company, New York; J. K. Hooker, Vice-President, Automobile Insurance Company, Hartford; C. F. Shallcross, United States Manager, North British & Mercantile Insurance Company, New York; James D. Smart, President, New Hampshire Fire Insurance Company, Manchester; and John J. Seibels, Vice-President, South Carolina Fire Insurance Company, Columbia.

Fire Apparatus Crash

She was "a good old rig," was the wagon at Engine 7 in Waterbury, Conn., and she only experienced trouble once before in a period of twenty-three years, but on March 26 she landed in a sand bank off North Main Street in Waterbury, her front end considerably stoved in and her left front wheel knocked sillier than a Hitler speech.

It all happened when Engine 7 was enroute to a grass fire and Paul Varlese of Waterbury, driving his car, was going somewhere else—until both vehicles reached the same spot at the same time.

Engine 7 skidded on for 100 feet. Lieutenant Jack Corrigan, who called her "a good old wagon in fine shape," was at the wheel and kept her upright so that no harm came to three fellow firemen clinging precariously to the rear bars.

Engine 7 made her first run March 20, 1920, and had but one accident before, skidding into a tree a few years ago. Fire Chief Tom Cavanaugh said the apparatus will be repaired if parts can be purchased.

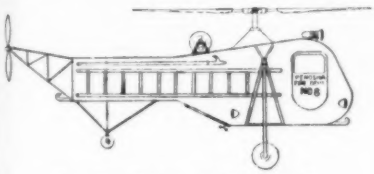
THOMAS F. MAGNER.

Correspondence

A Flying Fire Engine

To the Editor:

Why not a flying fire engine? The fire engine must go where people go. What would Al Smith do up there a quarter mile from the ground if the Empir State Building had a fire and the elevators and water pipes were not functioning.



The Fire Engine of the Future?

The rear fan of the machine, backed up to the window, could blow the smoke out of the room. A shot of fog, and the fire is out. Al could even be taken for a ride.

Do you remember in 1913 how the gasoline fire engines were labeled as an insult to the steamers? How people predicted that they could never stand the test? People also predicted that the steamer could never compete with the old gooseneck Americus hand pumper.

These flying fire engines will solve many of the fire fighting problems over there should they get these Sikorski helicopters. The stage will be set, when the shooting match is over, for a change in the methods of extinguishing fires. It will be possible to get a number of fires by dusting them out.

It is a jumping net without a jump. There will be no traffic tie-up to prevent a fire engine from responding to a fire and it will be possible to get there in a shorter period of time. You will be able to float around the building and discover just where the fire is. What an advantage it will have in putting fog in the right place! There are a hundred other reasons why the flying fire engine would be successful in extinguishing fires.

Yours truly,
PETER PIRSCH, President,
Peter Pirsch & Sons Co.

Auxiliary Fire Apparatus for Elmira, N. Y.

To the Editor:

A new piece of fire apparatus has recently been placed in service in Elmira, N. Y., for use by the auxiliary firemen. The truck chassis, a one and a half ton 1936 International, was donated by the Elmira Coca Cola Bottling Company. Five members of this firm, all auxiliary firemen, purchased the body, fenders, running boards and other equipment from a local salvage yard. These men did all the work, including the painting and striping.

The fire fighting equipment for the truck is being furnished by the Office of Civilian Defense and includes 200 feet of 1½-inch hose, 400 feet of 2½-inch hose, a twenty-four foot extension ladder, a fourteen-foot roof ladder, play pipes, hydrant connections, siamese couplings, double male and female couplings, axe, pike pole, shovels, pump tanks and other equipment to make it a first class job. A 500-gallon self-contained pump will also be mounted on the truck. Very truly yours,

CHARLES F. HOUGHTALING
Elmira, N. Y.

Helmets for Auxiliary Firemen

To the Editor:

Your round table discussion on OCD helmets in the May issue was very interesting to me, and from the standpoint of an auxiliary fireman, I do not believe they are as comfortable on the head or give nearly the protection from heat and water as do the new composition helmets or the old aluminum ones recently discarded by the Los Angeles Fire Department.

While on the subject of helmets it might interest you to know that the OCD white helmets issued to the Los Angeles Auxiliary Fire Force have been painted fire department red front and rear, but leaving a two-inch white stripe running from ear to ear over the top of the helmet upon which is transferred one-inch black triangles; Sergeant (Staff or Technical), two triangles and fireman first class, one triangle. This arrangement was conceived by the members of Engine Company No. 30 who, with the help of Engine 24 and Truck 24, refinished all of the helmets. We can now be distinguished at sight from an auxiliary policeman, air raid warden or others in the many branches wearing OCD helmets.

Very truly yours,
CHESTER B. ASHLEY,
Staff Sgt. Aux. Co. 20-A.

Lack of Apparatus Aids Fire

To the Editor:

Herewith is a photograph of a blaze which happened here in New Castle, Ind., on Tuesday morning, April 20.

The building is three stories high and the basement and street floor were occupied by Sears Roebuck. The second and third floors were occupied by apartments, offices, and a skating rink. The fire started in the basement, and apparently had an hour's start before the Fire Department was called, as an electric clock in the office of the Sears store stopped at seven a.m. and we received the alarm at eight o'clock.

Delayed Alarm and Lack of Equipment Aided This Fire

A carload and a half of asphalt roofing was stored in the basement, and the smoke from it didn't help the firemen any. The fire was under control at 1:30 p.m.

Help came from Muncie and Connersville A volunteer company from Mt. Summit five miles north of here came in and covered the town for us for eight hours.

We have tried in vain to get a priority for a 750-gallon quadruple, but no dice. This fire was fought without ladder equipment. Imagine our predicament had we had to evacuate people from the top floor with ladders.

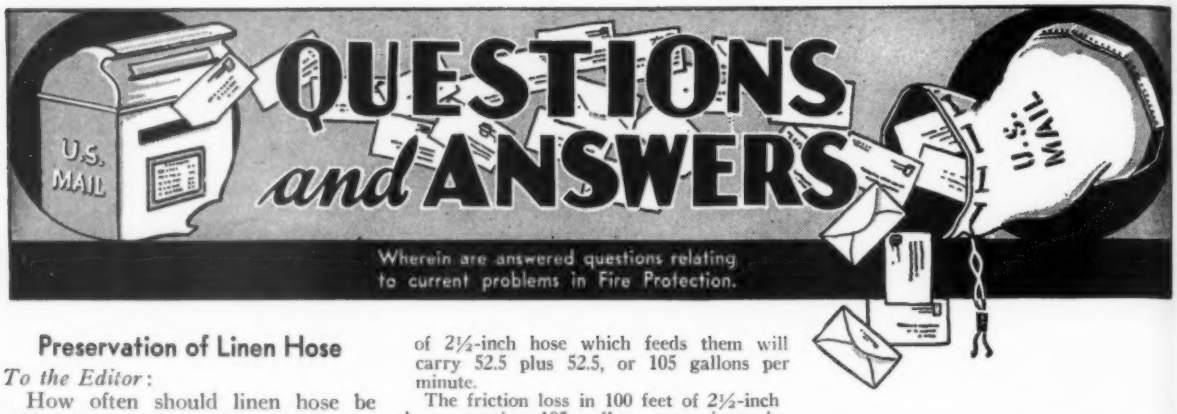
The actual loss from this fire will run between $150,000 and $200,000.

Yours very truly,
GEORGE VAN SANT, Chief,
New Castle, Ind., Fire Department

Rooming House Fire Kills Seven

Fire of determined arigin swept through a rooming house in Augusta, Maine, taking a toll of seven persons. Seven others were injured.

Auxiliary Fire Apparatus Recently Placed in Service



Preservation of Linen Hose

To the Editor:

How often should linen hose be taken down from the rack and taken? What is the best method of preserving it?

On 2-inch leader lines that are reduced to 1½-inch what water pressure should be maintained for hose this size? B. W. J.

Answer: Linen fire hose should not be subjected to the pressure test, for the wetting of the linen has a tendency to reduce the life of the hose.

If the hose is kept dry and away from corrosive fumes, it will last indefinitely.

Care must be taken to see that no water from the standpipe leaks through the valve and wets the hose, for this is a common source of destruction of linen hose.

With regard to the pressure on 2½-inch leader lines that are reduced to 1½-inch lines, the pressure which has been maintained will depend upon the length of the lines. For short lines, a pressure of around fifty pounds will give a satisfactory nozzle pressure, provided the nozzle is not too large.

Where very small nozzles are used, pressures even less than 50 pounds at the supply end of the hose may be satisfactory.

Relay Lines

To the Editor:

An engine is pumping through a 500-foot stretch of 3-inch hose to a second engine, from which one 200-foot line of 2½-inch hose is branched into two 100-foot lines of 1½-inch hose each equipped with ½-inch nozzle at 50 pounds pressure. The other branched line from the engine is 300 feet long, of 2½-inch hose, with 1-inch tip at 50 pounds pressure. What is the engine pressure? B. D.

Answer: To solve this problem, we start at the nozzle ends of the line and calculating the friction loss determine what the engine pressures will be.

Discharge from ½-inch tip at 50 pounds pressure is 52.5 gallons per minute.

The discharge from 1-inch tip at 50 pounds pressure is 209 gallons per minute.

The friction loss in 100 feet of 1½-inch hose carrying 52.5 gallons per minute is 10.2 pounds.

Then the pressure at the wye connection feeding the two 100-foot lines of 1½-inch hose will be 50 pounds plus 10.2, or 60.2 pounds.

As each of the two branched lines carry the same amount of water, the 200-foot line of 2½-inch hose which feeds them will carry 52.5 plus 52.5, or 105 gallons per minute.

The friction loss in 100 feet of 2½-inch hose carrying 105 gallons per minute is 2.73 pounds.

The friction loss in 200 feet of hose will be twice as much or 5.46 pounds.

Then the pressure at the second pumper, which supplies the 2½-inch hose feeding the branched lines will be 60.2 plus 5.46, or 65.66 pounds pressure.

The flow through the 300-foot line of 2½-inch hose is 209 gallons per minute.

Friction loss in 100 feet of 2½-inch hose carrying 209 gallons per minute is 10.9 pounds.

The friction loss in 300 feet of hose will then be 3 × 10.9, or 32.7 pounds.

The pressure at the engine supplying this 300-foot line of 2½-inch hose will be 50 plus 32.7, or 82.7 pounds.

And here is an inconsistency. We have this second engine supplying two layouts and the pressure at the engine on one of the layouts is 65.55 pounds while at the other it is 82.7 pounds. It must therefore be assumed that the discharge valve feeding the first line will be throttled in order to provide the reduced engine pressure.

The total flow through the 500-foot line of 3-inch hose will be equal to the flow through the two lines fed by the second pumper or 105 plus 209, or 314 gallons per minute.

The friction loss in 100 feet of 3-inch hose carrying 314 gallons per minute is 8.97 pounds.

The friction loss in 500 feet will be 5 times 8.97, or 44.85 pounds.

Assuming the higher of the two engine pressures for the second engine, namely, 82.7 pounds, the engine pressure at the first engine will be 44.85 plus 82.7 plus 10 pounds (inlet pressure to second pump) or 137.55 pounds engine pressure.

Complex Layout

To the Editor:

Engine No. 1 is pumping through two parallel lines of hose, one of which is 500 feet in length, 2½-inch diameter, and the other, 500 feet, 3-inch diameter; these two lines feed into engine No. 2, which in turn supplies two lines, one 200 feet in length, 2½-inch diameter, equipped with 1¼-inch nozzle at 50 pounds nozzle pressure; the other 250 feet of 2½-inch hose equipped with a 1⅛-inch nozzle at 60 pounds pressure.

What will be the pressure at Engine No. 1? J. E. K.

Answer: The discharge from a 1¼-inch nozzle at 50 pounds pressure is 326 gallons per minute.

Discharge from a 1⅛-inch nozzle at 60 pounds pressure is 265 gallons per minute.

The friction loss in 100 feet of 2½-inch hose carrying 326 gallons per minute is 24.26 pounds.

The friction loss in 200 feet will be 2 times 24.26, or 48.52 pounds.

The friction loss in 100 feet of 2½-inch hose carrying 265 gallons per minute is 16.96 pounds.

The friction loss in 250 feet will be 2½ times as much or 42.4 pounds.

The discharge pressure at engine No. 2 will be either 50 plus 48.52 = 98.52, or 50 plus 42.4, or 92.4 pounds.

Assuming that the pressure at the second pumper is 98.52 pounds, it would mean that the discharge outlet feeding the other line would have to be throttled to give 92.4 pounds.

Change the parallel lines of 2½-inch and 3-inch hose to a single line of 2½-inch hose. The factor for this purpose is 6.1.

500 ÷ 6.1 = 82 feet of 2½-inch hose.

The flow through this combined line of hose will be 326 plus 265, or 591 gallons per minute.

The friction loss in 100 feet of 2½-inch hose carrying 591 gallons per minute will be 76 pounds.

The friction loss in 82 feet will be .82 × 76, or 62.32 pounds.

Then the pressure at engine No. 1 will be 98.52 plus 62.32 plus 10 (inlet pressure at second engine) = 170.84 pounds.

Gauge Readings When Operating

To the Editor:

At a fire in a junk yard a 1,000 gallon rotary pump is being operated. The layout consists of three lines, of 2½-inch hose each 400-feet long and equipped with a 1⅛-inch tip. Relief valve is set at 130 pounds. Hydrant pressure is 119 pounds and engine pressure is 120 pounds. Pump is operating and the compound gauge drops to 105 pounds.

The layout is changed with the addition of another 2½-inch line which is 400 feet in length and equipped with a 1¼-inch nozzle. The pump is still operating in capacity gear and the engine pressure drops to 78 pounds and the compound gauge remains at 105 pounds.

Should the compound gauge drop below the pressure gauge or should

the pressure gauge drop below the compound gauge?

J. J. R.

Answer: The reading on the compound gauge of the pumper may drop below the reading on a pressure gauge, or the pressure gauge reading may drop below that on the compound gauge. It all depends on the type of pump being used and the hydrant pressure.

A rotary pump does not use much of the pressure delivered to it by a hydrant, so that when the discharge from the pumper is large, as with the case of the four lines in the problem you give, the discharge pressure may be less than the hydrant pressure.

On the other hand, if a single line of hose is being used, and a fairly high pressure maintained, the pressure at the hydrant may drop below that of the discharge side of the pumper.

In the first problem you give, the nozzle pressure at each of the three nozzles will be 50 pounds, and the discharge from each, 265 gallons per minute. This gives a total discharge of 795 gallons per minute, which is well within the capacity of the pumper at 120 pounds.

In the second problem, where a fourth line is added with a 1¼-inch nozzle, the discharge from each of the three 1⅛-inch nozzles will be 213 gallons per minute, where the nozzle pressure is 32.4 pounds per square inch. The discharge from the three 1⅛-inch nozzles will therefore be 3 x 213, or 639 gallons per minute.

The pressure at the 1¼-inch nozzle will be 21.3 pounds, and the discharge from this nozzle will be 208 gallons per minute.

The total discharge from the four nozzles will then be 847 gallons per minute.

As both the engine pressure and the total discharge are well within the capacity of the pumper, it would be possible to increase the pumper pressure without overloading the pumper.

Embers Cause Fire

The recent big Albers Milling Company fire at Oakland was the freak cause of a new Oakland (Calif.) blaze, according to Battalion Chief Bernard Dooley, who said that $25,000 damage to the McGuire and Hester plant at 796 66th Avenue, Oakland, was caused by smoldering embers from the mills more than five miles away.

Embers and burning grain from the Albers fire had been dumped in a marshland fill-in. It is thought that a stiff breeze picked up some of the still-hot grain and wood, deposited under the wood-and-brick constructed war plant and then fanned them into flames that swept the building.

Timothy Keliher, the watchman at the plant, was rescued by firemen, who led him to safety after he had been trapped by smoke and flames.

BOB GREENOCK.

Chief Thrasher Retires

Chief C. H. Thrasher of the Tuskegee, Ala., Fire Department resigned his duties on July 1.

In addition to being Fire Chief, Chief Thrasher also served as Chief of Police for the past twenty-three years.

Our inquiring reporter overhauls the firemanic news of the day

The "Key" to the Situation

Members of the Quincy (Mich.) volunteer F. D. will respond quickly to a night alarm—providing they remember their key to the building housing the fire truck. The apparatus is stored in what until recently was the community's only all-night garage. Well, the garage went on a 72-hour week and is locked at night so each fire vamp has been issued a key to the building. Lessee, somewhere else in these "minutes" we recollect reporting on another case, in which the Brothers were locked *in* at their fire station.

* * *

Costly Proof!

Half a dozen avid clippers sent us the story about Portland (Ore.) department's red face! Seems the Braves got it attempting to demonstrate their contention that storing gasoline in unapproved quarters was dangerous.

They seized a drum of the fuel and took it to the fire station (we dunno which one) before moving it to a safe place. It was to be "evidence" to prove their point. Well, it did! Fire damage to the station was estimated at $2,000. Should we say that that gasoline was **"high proof stuff?"**

* * *

Economical Fire!

Speaking of fires "right at home," take the case of Lexington (Mass.) ferinstance. According to our Bev. Farm's scribe, if there has to be a fire, why not have it convenient to the firehouse? In fact, why not the house *itself?* The Brothers of Lexington believe it saves wear and tear on apparatus as well as rationed gasoline and tires. They hardly had to turn a wheel because their fire was right in the central fire house. Discovered in the battery room in the attic of 2½-story structure the blaze swept through entire attic before it was controlled, with loss of $1,500.

* * *

Now You Tell One!

The days of Mack Sennett are gone, but this is distinctly one right out of his scripts. It happened in Gig Harbor (Wash.) where you might expect anything with a name like that. And the item, strangely enough, came to us from at'other side of the country—New England. Here it is—just as the newspaper printed it:

Gig Harbor, Wash.—Fire Chief Dick Thurston ordered his volunteer fire department out for a few practice runs after the showing it made when the movie theatre started to burn. The firemen rushed to the fire scene. The driver of the truck pushed a guard post in front of the fire hydrant and the boys couldn't hitch up the hose immediately. A fireman grabbed one end of the hose and unrolled it down the street to the hydrant on the next corner. Meanwhile the crew freed the first hydrant and connected the hose. Turning on the water, they discovered both ends of the hose were connected to the water system. The pressure became so great a special wrench was needed to free one end of the hose. Meantime, a civilian put out the small fire.

* * *

More Comedy of Errors

Mebbe it's the weather or something, but our contributors this month run to the ridiculous rather than the sublime with their offerings. Take the one from an unnamed reader, about the happenings at Bridgeville (Md.)—where Judge Wm. T. Nabb was riding alone in his car when he tossed a cigarette out the window—or thought he did. Well, gentle reader, soon after a companion rider discovered a small fire in the car. Since the Judge was near a fire station, he stopped there and asked a fireman to kindly extinguish the little blaze for him.

Nothing loath the smoke-eater obligingly tossed a bucket of water on the small fire—or at least he *thought* it was water. However, it turned out to be *kerosene!* There were a few busy moments for the Brothers, what with the "customer" being a Judge and all that, but they rose to the occasion and saved the car, and their faces. Ever since, the unnamed who formed his own bucket-brigade has been wondering whatthehell!

* * *

Foundation Fire Hazard

In Columbia (S. C.) fire-cautious retail stores are keeping a watchful eye on their baby pants. Fire Chief A. McC. Marsh said he had received a report that tests showed a $56,000 blaze at a 5 and 10-cent store in that city last September was caused by spontaneous ignition of 52 dozen baby pants. Wanted—more pants inspectors!

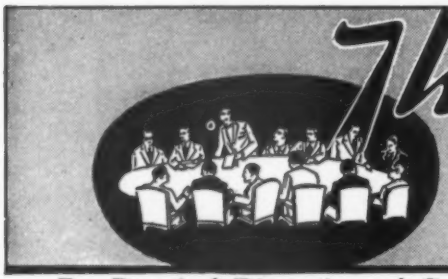
* * *

Honors to Whom Honor Is Due

Charles J. Brennan, who recently retired as the head of the San Francisco Fire Department, and who has been recuperating in Los Angeles from his arduous duties, was signalled out by his City for special honors in May. So far as we know, this is the first time in the history of the fire service that any retiring officer has been made "Chief Emeritus" of a Fire Department. That is what they did to Charles Brennan—pinned a gold badge on him, and presented him with a parchment scroll duly extolling his virtues, and proclaiming to the world that he henceforth is "Chief Emeritus" of the San Francisco Fire Department.

Charles took it in his stride, in the presence of Chief John Alderson and the entire Board of Fire Commissioners of the City of Los Angeles, who served

(*Continued on page* 399)



The ROUND TABLE

For Practical Discussion of Current Fire Department and Fire Management Problems

RESPONDING TO FIRE ALARMS DURING BLACKOUTS

RESPONDING to fires in ordinary times has its hazards, but under blackout conditions it is even more dangerous. Restrictions affecting response during blackouts differs in many cities. Some are allowed to respond with sirens going, full headlights on and red lights flashing; some respond with headlights and oscillating lights but with their sirens silenced; still others have to respond with headlights dimmed or out entirely. Many chiefs feel that response would be less hazardous if they were allowed to use their sirens.

Readers are invited to send their comments on this subject which will be continued in the August issue because of the many replies received.

Address communications to Round Table Editor, FIRE ENGINEERING, 24 West 40th Street, New York 18, N. Y.

HERE IS THE PROBLEM

What precautions do you take during blackouts to insure prompt and safe get-away from stations in case of fire alarm?

Do you use regular headlights, oscillating or flashing red lights, and sirens when responding to alarms durin blackout?

What recommendations would you make for safe and prompt travel for fires during blackouts?

Discussion of the Topic

M. W. Lawton, Chief, Middletown, Conn.: During blackouts the off-shift responds and reports at the station nearest their homes. In this way we can figure on a full crew. As all autos must pull into the curb when an air raid alert is sounded, we have no trouble in getting away from the stations.

We use regular headlights and red flasher lights and also sirens when responding to alarms.

So far we have had no trouble with the response of the men when an alert is sounded. We have a large red card for the firemen to show in their windshields when they are responding.

I would recommend that we continue as in the past by using red flasher or oscillating lights and headlights, as well as sirens. To my mind that is the only safe way of insuring prompt response to alarms during air raid alerts or blackouts.

O. T. Sanborn, Chief, Portland, Me.: In the event that fire apparatus is required to move during a blackout, regular headlights on low beam, red lights and sirens will be used.

It is most important to get to a fire and control it as quickly as possible and thereby avoid the possibility of the fire going through the roof and lighting the entire area.

Trial blackouts should not be carried to such an extreme as to endanger lives or tend to increase fire losses.

Blackouts during an actual raid would be rendered less ineffective by allowing the use of low beam headlights on fire apparatus than would be the result should a serious fire get started.

A. F. Taylor, Chief, Richmond, Va.: Headlight dimmers must be on before leaving quarters, and officers in charge shall see that all men are on the apparatus.

If we find dimmers do not give sufficient light, orders are to use regular headlights. On some of the apparatus we also use oscillating or flashing red lights. Sirens are not used, apparatus being equipped with bells which are used when necessary in responding to fires and returning to quarters.

I would recommend that headlights be used and that officers and drivers be ordered to proceed with utmost caution to prevent accidents and assure safe arrival of apparatus at fires. Furthermore, I think the change in blackout signals has caused some confusion and I would suggest going back to the original signals.

Walter S. Blanton, Chief, Savannah, Ga.: During a blackout firemen are stationed at their machines and all passageways leading from fire stations are kept clear.

All chiefs' cars and fire apparatus are equipped with headlight masks which have slits in them. Sirens are used in responding to fires during blackouts.

To assure safe and prompt travel to fires during blackouts I would suggest that drivers drive carefully and at a moderate rate of speed.

A. J. Cote, Chief, Woonsocket, R. I.: We take the same precautions as at any other time. We use headlights, red lights and sirens.

We have not had an alarm during a blackout.

Herman E. Gutheim, Chief, Cambridge, Mass.: We have had only one alarm during practice blackouts. We proceeded at that time without lights and reached our destination without difficulty. Since that time I have given orders that full lights are to be used on all alarms as there is no sense in taking chances of accidents.

We use our regular searchlights and wig-wag red signals; with bells and sirens operating, but we do cut our speed to as near fifteen miles as possible. Naturally at a slower speed the time of arrival at a fire is lengthened but not enough to make any vast difference.

William F. Cowden, Chief Enginee Philadelphia, Pa.: During every ru by a fire company one man goes ou into the street to wave down traffic and see that all is clear for the apparatus. At night he carries a red lantern and the last piece of apparatus slows down so that he can get on and respond with the company.

In responding to alarms during the daytime we use our bells and flashing red lights, while at night regardless of whether it is a blackout or not, we use our headlights, bells and flashing red lights. When returning after an alarm at night we dim our lights as low as possible and only use our bells at intersections or whenever it is necessary to give a warning.

During blackouts we have to drive very cautiously as there are quite a few automobiles and various other vehicles parked without lights, and with all traffic and street lights out, this condition has slowed us down somewhat.

In addition to using the headlights, bells and flashing red light, if the drivers of apparatus while responding during blackouts will use extreme caution and keep their apparatus under complete control, it will assure their safe arrival at the scene of the fire even though their response will be slowed down.

Z. F. Drouin, Chief, Lewiston, Me.: Prompt and safe get-away from fire stations in case of fire alarm during a

blackout has been efficiently practiced here, with great success. The sectional lights are turned on in the station, giving the minimum lighting facilities for a quick get-away. They are then put out. The headlights on all apparatus leaving the building are promptly put on. The speed of the apparatus is the usual rate of speed, that is, 35 to 40 miles per hour.

Fires caused by incendiary bombs, illuminating the skies and aiding the enemy to better targets of vital importance, should be put out at once. The use of headlights on fire apparatus responding to a fire is a necessity. In the past, blackout lights were used but proved very inadequate and so were discontinued. The chances of traveling with headlights are less compared to the dangers of a concentrated fire leading perhaps to a conflagration which would illuminate areas for miles around.

I have found traveling during a blackout much safer than at other times, for the streets are kept clear of automobiles and pedestrians. Fire apparatus can increase their speed without fear of endangering lives.

I believe that each man in the fire department should know his duties and perform them as they come. Having had the training and knowing their apparatus, they can truly be classed as "soldiers of the frontline home defense."

Joseph L. Trudell, Chief, Bay City, Mich.: In order to insure safe get-away during a blackout we pull the trucks about half way out of the fire station. Sirens are used also as an air raid warning.

We use the regular headlights in responding to alarms during blackouts. In the lighter open spots, dims and no headlights at all are used.

I would recommend that the leading truck drive with dims and no lights where it is possible and that the other trucks follow with lights out and all proceeding with extreme caution.

Frank J. Callahan, Chief, Central Falls, R. I.: On Green 3 or warning, we move out to three adjoining streets, all within 65 yards from the station, where all directions can be given without too much confusion.

We use sirens and bells as well as flashing lights. Headlights are not dimmed when answering calls to fires.

We have slowed up our speed when answering night alarms, due to parked cars that cannot be seen until the apparatus has made the full turn into dimly lighted thoroughfares.

John Gibson, Chief, Mount Vernon, N. Y.: Upon receipt of alarm during blackout period, in order to insure a safe get-away from station, housewatchman shall designate a member to precede apparatus to center of street and stop pedestrian and vehicle traffic. Then apparatus shall proceed cautiously on receipt of all-clear signal from member in street.

Headlights and oscillating lights are and should be used during blackouts. Sirens are not used during blackout periods.

Response to alarms of fire is slowed up somewhat due to blackout restrictions but not enough to interfere with safe department operation.

To insure safe and prompt travel to fires during blackouts, drivers should have apparatus under control at all times especially at street intersections. They must be cautious, alert and drive with safety.

Howard Travers, Chief, Baltimore, Md.: Commanding officers of apparatus are instructed to observe safety regulations under any and all conditions.

Regular headlights, flashing red lights and sirens are used when responding to alarms of fire during blackouts.

Response is slowed up but commanding officers are instructed to proceed with the utmost dispatch, bearing in mind public safety at all times.

John J. McCarthy, Asst. Chief of Department in Command, New York, N. Y.: As part of blackout training, all members practice visual orientation in total darkness. Before the total blackout, members place their fire clothing and helmets at a fixed point on apparatus for instant availability. During blackout, all members remain on apparatus floor near apparatus. Alarms are checked on assignment cards by means of a blue bulb on flashlight at the housewatch desk. The side panels of apparatus doorways are permanently painted a bright white to a height of ten feet. This aids in guiding apparatus to the street. A broad white line is permanently painted on the apparatus floor beside normal position of apparatus to guide chauffeur and tillerman to street. The tip of horizontal aerial ladder is painted white to guide tillerman when leaving quarters and to facilitate placing of ladder at a desired point on a building. Members of ladder companies, on receipt of an alarm, don fire clothing in front of quarters before apparatus leaves. The sidewalk in front of quarters is cleared of pedestrians. Response from quarters is made cautiously.

Regular headlights and oscillating or flashing red lights are used. Whistles, not sirens, are used when responding.

I would recommend that apparatus proceed at a rate of speed consistent with safety in passing stalled roadway vehicles and obstructions such as traffic islands, stanchions, excavations, etc.; that apparatus be slowed to a walk at intersections where other fire apparatus is known to pass: on arrival at alarm that all apparatus be placed as near as possible to the curb, depending on circumstances and that officers and members dismount and report to the officer in charge by using sidewalk, never roadway.

A. J. Bargagni, Chief, Bethesda, Md.: All members are ready at their post. Outside watch detail is made to see that front of company quarters is free from obstructions.

We use regular headlights using the down beam as well as oscillating red lights when responding to fire calls.

I believe that there should be complete understanding with city or town police as to right-away of fire apparatus and the members of the fire department.

Utmost care must be taken and speed reduced to 30 miles per hour straight away and ten miles per hour around street corners.

Charles J. De Vleeschower, Chief, South Bend, Ind.: At the present time we are making special blackout lights for all stations. These will conform to the following requirements: Watts not more than fifteen, circular aperture diameter of one inch. In each station

(*Continued on page* 398)

THIS DISCUSSION WILL BE CONTINUED

Due to the large number of Chiefs who contributed their experiences, the discussion on this subject will be continued in the next issue.

Jacksonville Firemen Present Chiefs With Gold Badges

As an expression of good fellowship, firemen of the Jacksonville, Fla., Fire Department recently presented solid gold badges to Chief G. E. Hare (right) and Deputy Chief E. A. Perry (center). First Assistant Chief J. B. Chancey is shown making the presentations on behalf of the entire personnel of the department.

Manufacturers' Announcements

Cardox Demonstration at Monee

On May 12, a fire extinguishing demonstration was held at the Monee, Ill., plant of the Cardox Corporation. More than eighty-five protection engineers from all parts of the United States and Canada were present at the tests.

Among the tests was the extinguishing of a fire involving a frame building 24 x 24 x 10, of approximately 7,000 cubic foot volume. Within the building were bales of paper and wood cribbings and a gasoline pan placed under the wood cribbings to intensify the fire.

The fire was automatically detected by means of fire detectors placed on the ceiling. After the fire had been burning for one minute and six seconds, it was promptly extinguished by the carbon dioxide.

The second test involved a metal sided pool 10 x 20 feet in area. Cardox linear nozzles were placed on each of the 20-foot sides of the pool. The fire was allowed to burn long enough to heat the side walls of the pools adequately, as well as metal parts placed in the pool. Gasoline, poured over the surface of the oil, facilitated the ignition of the oil.

The oil was permitted to burn for about a minute and five seconds, when the Cardox system was put into operation. Within thirty-one seconds the fire was extinguished.

A third demonstration, which is illustrated in the photographs herewith, involved a pool of 16 x 30-feet dimensions. A hundred gallons of oil was placed in the pool and the oil ignited. Fire was permitted to burn for a minute and forty-five seconds, when the Cardox system went into operation.

The fire was completely extinguished in fifteen seconds, despite the fact that a wind of from three to four miles per hour was blowing during the demonstration.

Two other tests on a medium sized gasoline pool fire and an oil transformer fire were also made.

Plastic Nozzles Replace Critical Metals for Fire Hose

Plastic nozzles are replacing critical metals as an essential of fire fighting equipment in industrial plants and institutional buildings.

The new plastic nozzles, precision-molded by American Molded Products Company, 1751 North Honore Street, Chicago, Ill., are corrosion-proof, nondenting, and highly resistant to acid and alkalis, liquids and water content.

Two types of nozzles are produced by American, one a combination spray and straight stream with a thumb-spring for controlling it and the other a straight-stream nozzle. Both nozzles are furnished for standard hose sizes of fire extinguishers, tanks pressure-operated by stirrup pumps, etc.

New Valve for Carbon Dioxide Fire Extinguishers Developed

A new type of valve for carbon dioxide fire extinguishers, known as the "Squeez-Grip," has been developed by engineers of the C-O-Two Fire Equipment Company, of Newark, N. J.

The new valve operates by a lever directly over the carrying handle of the extinguisher. By merely applying pressure, or squeezing, with one hand, the valve is opened and the gas discharged. On releasing the pressure, the valve closes and the gas discharge is cut off.

View of the New "Squeez-Grip" Valve

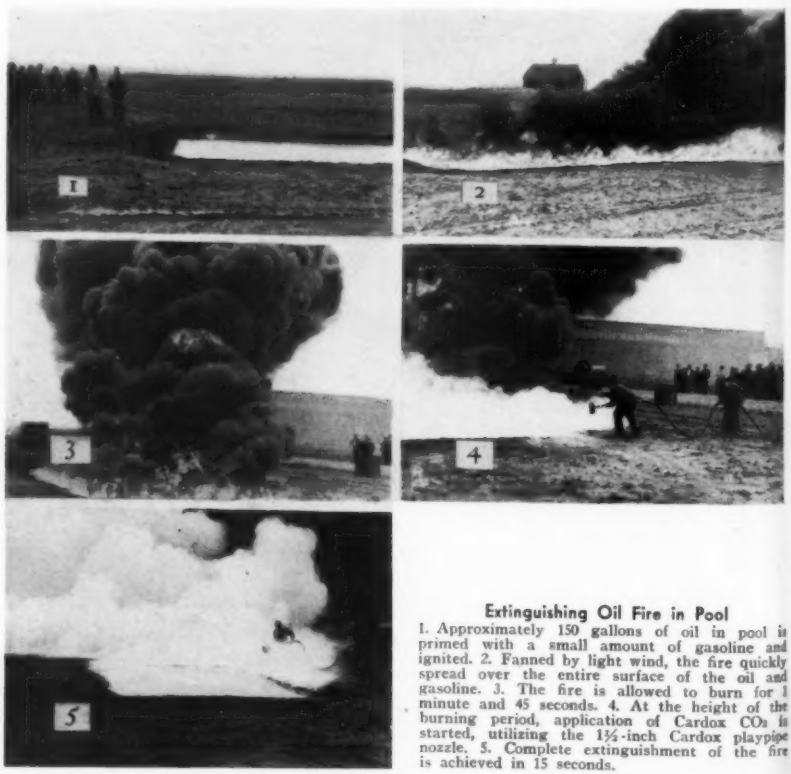
The valve can be opened and closed without setting down the extinguisher, which must be done when a handwheel type of valve is used. As the operator, carrying the extinguisher with one hand and holding the discharge horn in the other, can easily start or stop the discharge while in motion, there is no loss of time or gas while maneuvering around a fire.

On closing, the valve is forced tightly against its seat by the tremendous gas pressure in its own cylinder. There are no replacement parts, such as sealing discs, etc., and the valve does not have to be taken apart for recharging and reassembling after filling.

Carbon Dioxide Extinguisher with "Squeez-Grip" in Operation

Folder Issued by Kennedy Valve

Water department superintendents, fire chiefs, and municipal officials will be interested in a new folder describing the Kennedy SAFETOP Fire Hydrant which has just been published. The folder concisely outlines this design, which has been characterized by water department men as "the greatest advance ever made in fire hydrant design." Sectional views show the construction of the entire hydrant, with an enlarged illustration of the Safety Breakable Section which can be replaced within half an hour if the hydrant is struck in a smashing collision. A complete parts list and dimensions are also included. Copies of the folder can be obtained by addressing The Kennedy Valve Mfg. Co., Elmira, New York, and asking for Bulletin 62.



Extinguishing Oil Fire in Pool

1. Approximately 150 gallons of oil in pool is primed with a small amount of gasoline and ignited. 2. Fanned by light wind, the fire quickly spread over the entire surface of the oil and gasoline. 3. The fire is allowed to burn for 1 minute and 45 seconds. 4. At the height of the burning period, application of Cardox CO_2 is started, utilizing the 1½-inch Cardox playpipe nozzle. 5. Complete extinguishment of the fire is achieved in 15 seconds.

DIRECTIONS FOR
CARE OF FIRE HOSE
DO NOT allow hose to remain in wagons or on reels if wet or muddy. Remove all mud by washing or brushing. To dry, expose hose to air in towers or on racks preferably at full length. When outdoor racks are used hose should be properly protected from sun and rain.
Cement and flagstone sidewalks absorb a tremendous amount of heat which is injurious to rubber lining. Therefore this method of drying hose should be avoided.
EUREKA FIRE HOSE is antiseptically treated and will not mildew or rot if given ordinary Fire-Department care; but continued dampness is injurious to cotton fabric. Mud often contains metallic or other substances that are chemically injurious to hose, if permitted to remain on it.
Do not permit hose to remain on apparatus for any great period of time when not used. It should be removed, hung up in towers or on racks and replaced with a fresh supply. Avoid short bends in hose that is stored away. When necessary to store hose in folds change the folds occasionally to prevent permanent set of hose.
When new hose is received do not allow it to remain packed in cases until it may be required, but remove from cases and loosen coils. TRY OUT COUPLING THREADS AS SOON AS HOSE IS RECEIVED.
All rubber-lined hose should have water passed through it at frequent intervals to moisten the rubber, and then should be thoroughly drained and dried before being returned to service.
Avoid exposure of hose to very hot, dry air. It should not be stored where exposed to the sun's rays. When hose must be kept in hot and dry places, it is best to pass water through it monthly.
Extreme cold causes a deterioration of rubber, but not sufficient to make inadvisable the storage of hose in cold hose houses, provided the hose is thoroughly drained and dried.
Acids and other chemicals, oils, iron rust, fumes arising from some processes, etc., are injurious to hose and contact with them is to be avoided.
When discharging or recharging chemical engines or extinguishers, see that solutions used do not come in contact with the hose.
Be careful that the gasoline used on your apparatus is perfectly tight against drip and vapor. A small deposit of gasoline leakage will separate the rubber from the fabric of fire hose and produce subsequent rupture when placed in service.
When fire hose is being used see that suction strainer, engine or hydrant is not being chafed by vibration at point of contact with the ground. Afford hose the proper protection at this point.
Under no conditions should vehicles be permitted to cross fire hose lines unless hose is properly protected by the use of bridges available for this purpose.
EUREKA FIRE HOSE
Division of United States Rubber Company
1230 Sixth Avenue, New York, 20, N. Y.

This Chart tells you how to protect and preserve your fire hose for the duration!

The many departments throughout the nation that are fully equipped with Eureka Fire Hose are very fortunate. They have hose built for long life and tough service.

However, regardless of what type of fire hose you have, it should be given the best of care. Replacements are difficult. The chart illustrated here tells you in detail how to protect your fire hose and keep it in top-notch condition, ready for any emergency that may arise.

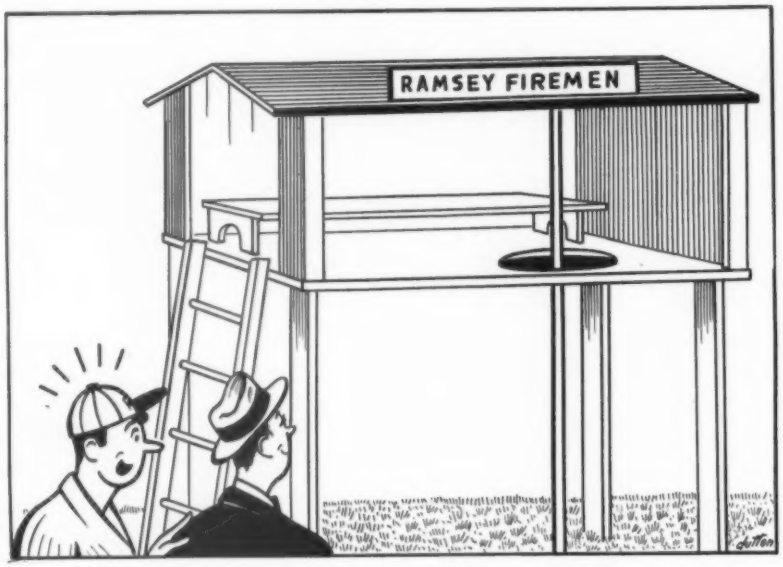
This chart has been used successfully by fire companies from coast to coast. You will find it valuable and important to you. If you do not now have one, or if you would like additional copies, write today to Eureka Fire Hose, Division of United States Rubber Company, Rockefeller Center, New York, 20. Your request will be filled promptly.

EUREKA FIRE HOSE

DIVISION OF UNITED STATES RUBBER COMPANY 1230 SIXTH AVENUE, ROCKEFELLER CENTER, NEW YORK, 20

We shall appreciate your mentioning FIRE ENGINEERING *when writing advertisers*

FALSE ALARMS



"It's a New Dugout for Our Baseball Team that the Fellows Designed and Built for Themselves!"

"I want to grow some trees in my garden. Can you sell me a few seeds?" inquired Mrs. Newlywed.

"Certainly, madam," replied the clerk. He fetched her a packet.

"Can you guarantee these?" she asked.

"Yes, madam, we can."

"Will the trees be tall and thick in the trunk?"

"They should be, madam."

"And quite strong at the roots, I suppose?"

"Oh, yes, madam."

"Very well. I'll take a hammock also."

"You look fed up, Mr. Jones."

"Yes, I've had a trying day. My office boy tried that old gag, about wanting the day off to attend his grandmother's funeral. I thought I'd teach him a lesson, so I said I'd go with him."

"Not a bad idea. Wasn't it a good baseball game?"

"It wasn't a baseball game. It was his grandmother's funeral."

The preacher finished his sermon with "All liquor should be thrown in the river."

—And the choir ended by singing, "Shall We Gather at the River?"

An old sea captain was telling about a trip down the Orinoco River some years ago. They had not gone far when a swarm of mosquitoes from the shore settled upon the boat. Everybody was forced below. After several hours they came up on deck, and found that the mosquitoes had left—and so had every sail on the brig! They had carried away every stitch of the canvas.

Two weeks later, said the old captain, the same swarm of mosquitoes came out to meet the vessel, and every blasted mosquito had on a pair of canvas breeches!

A man decided to go next door and borrow a lawn mower. Before he stepped off his porch he began to guess what his neighbor would say. "He probably won't give it to me," he growled. He went a few feet farther. "The old skinflint has a lot of nerve refusing me his lawn mower." By the time he reached his neighbor's house he was burning up. When the neighbor opened his door the would-be borrowed shouted indignantly: "To hell with you and your lawn mower!"

Young Senator: "When anybody comes around talking about some new theory you always endorse it."

Old Senator: "Yes, I'd rather endorse it than have it explained to me."

Then there's the one about the actor who toured the country in "Hamlet."

"What kind of a run did you have in Savannah?" he was asked.

"Well," was the reply, "we beat the audience over the county line by three minutes!"

Angry Wife: "Now that I have an electric refrigerator, see what you can do about getting a mechanical stenographer."

"What's the idea of a rubber plant in a vegetable garden?"

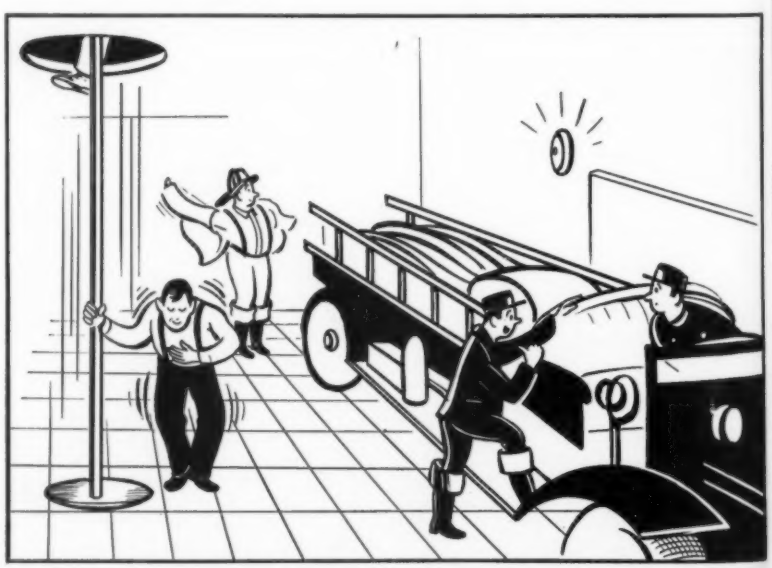
"To raise tires for my garden truck, of course."

Rastus: "Say, Sambo, what time in yoah life does yo' think yo' wuz scared de worst?"

Sambo: "Once when ah wus callin' on a married gal an' her husband come in an' caught me. Boy, wuz ah scared!"

Rastus: "How are yo' suah dat was de worstest yo' evah bin scared?"

Sambo: "'Cause her husbum turned to dat wife ob his an' say: 'Mandy, what's dis white man doin' here?'"



"He Still Takes a Bow After Every Slide . . . Used to Be with the Circus You Know!"

Opening a portable carbon dioxide fire extinguisher valve used to be a rather slow operation. First the portable was set down; the valve hand-wheel was turned to the open position, the portable then picked up and the gas directed at the fire. Now, C-O-TWO has changed all that.

NEW SQUEEZ-GRIP SAVES GAS AND TIME

No need to set the extinguisher down to open a C-O-TWO Squeez-Grip valve; even while carrying the cylinder the valve is easily opened or closed. Nothing to do but squeeze the control lever, over the carrying handle. The valve is opened just as fast as you can close your hand. Fire is out in split seconds—there will be no damage to materials or equipment. Now more than ever, C-O-TWO is Safer because it's Faster.

C-O-TWO is a registered trademark and corporate name of this company. C-O-TWO is inspected and labeled by the Underwriters' Laboratories; approved by Factory Mutuals and the Bureau of Marine Inspection and Navigation. To be safe specify C-O-TWO.

C-O-TWO FIRE EQUIPMENT COMPANY

NEWARK, NEW JERSEY

Sales and Service in the Principal Cities of United States and Canada

JUST OFF THE PRESS!

The third edition of our original, "FIGHT FIRE WITH WATER", has been completely revised. It is now more than a booklet—it is "A Manual". Mail coupon today for your free copy.

THE MOST POWERFUL portable pumper ever built for its weight and size. Embodies improvements made possible only through years of specialized engineering and thousands of actual usage tests. Proved by Government Agencies. Base 24 inches by 12 inches; height 13 inches; net weight, complete, ready to operate, 70 pounds.

CAPACITY

Pressure	100	125	150	175	200	225
Gals. per Min.	63	59	53	46	40	20

FREE MAIL TODAY

PACIFIC MARINE SUPPLY CO.
SEATTLE, WASHINGTON

Please send me a copy of the new revised edition of "FIGHT FIRE WITH WATER" and a copy of your Portable Pumper Folder.

NAME.....

STREET.....

CITY AND STATE.....

WHAT'S BURNING?

THE following list includes fires of $50,000 loss and over in the United States and Canada, for the month of June, 1943. These figures, compiled from the telegraphic reports, are based on estimates made at the time and are subject to later investigation and revision. Taken as a whole, however, they are an approximately correct view of the losses incurred. The figures represent losses in thousands of dollars.

Month Ending June 30	Losses in Thousands of Dollars
Hanford, Cal.—J. C. Penney Co. store destroyed	80
Bend, Ore.—Hdqts. of General Contractors of U. S. Army Camp Abbott destroyed	50
Saranac, Mich.— Universal Metal Products Co. plant destroyed	125
Machias, Me.—Six business bldgs. destroyed and Congregational Church damaged	60
Wallington, N. J.—Four old bldgs. of the Anderson Lumber Co. destroyed	125
Seattle, Wash.—Nettleton - Baldwin plant and two adj. factories owned by the Johnson Mfg. Co. and the Western Mattress Co. destroyed	300
Portage La Prairie, Man.—Anderson block damaged	80
Toronto, Ont.—Bldg. housing the International Resistance Co. damaged	60
Chicago, Ill.—Mayfair Lumber Co. yard damaged	150
New Orleans, La.—Plant of the Nola Laundry, Inc., damaged	80
Cornerbrook, Newfoundland—Public school destroyed	80
Toronto, Ont.—Business block in downtown Hull in Quebec housing cafe and hardware store damaged	50
Great Bend, Kan.—One hundred tons of freight, a loading dock, four freight cars and a warehouse of the Santa Fe Railroad freight depot destroyed	250
Southerlin, Ore.—Schetke Fisher Lumber Mill damaged	50
Pendleton, Ore.—U. S. Air Field Post Exchange bldg., stock and fixtures destroyed	80
Middle Amana, Ia.—Refrigeration mfg. plant of the Amana Society destroyed	215
Reichikan, Alaska—Genl. store of R. F Peratovich and theatre at Klawak, Prince Wales Island destroyed	65
Overgaard, Ariz.—Local sawmill and nearly 35,000 board feet of lumber destroyed	50
Washington, Ind.—Plant of the Coreoran Metal Products Corporation destroyed; machinery and materials damaged	225
Salem, Ore.—John J. Roberts machine shop two farm bldgs. and contents destroyed	50
Fall River, Mass.—Bldg & equip. of the plant of Sanitary Laundry, Inc. damaged	50
Anchorage, Alaska—Main hangar of Wooley Airways containing two Travelair planes destroyed	80
Oleum, Cal.—Refinery, oil stock, equipment machinery, etc., of Union Oil Co., damaged	1,700
Ladner, B. C.—The B. C. Peat Co. plant near here destroyed	215
Phoenxi, Ariz.—Bldg. of the A. Z. Meat Co's main bldg. destroyed	115
San Francisco., Cal.—Castle Hill apts. damaged	50
Idaho Falls, Ida.—West Gold Exploration Co.'s mill, 12 miles from Stanley, destroyed	50
Winfield, La.—Sawmill at the Mansfield Hardwood Lumber Co. destroyed	80
Holyoke, Mass.—Boxing and wrestling center and night club, The Valley Arena Gardens, Inc., destroyed	125
Orillia, Ont.—Plant of Vollans Industries, Ltd., damaged	50
Rainier, Ore.—Rainier Tavern, Rainier feed store, Lee apts., city docks destroyed	125
Bellingham, Wash.—Bloedel - Donovan Lumber Co. damaged	50
Atlanta, Ga.—Briarcliff Laundry destroyed	125
Atlanta, Ga.—Plant of the Blue Ribbon Hatcheries containing 50,000 chicks and 350,000 eggs destroyed	50
Massillon, Ohio—Warehouse and mill, together with large stocks of flour and feed stocks of the Buckeye Cereal Co.; adj. bldg. occupied by Massillon - Cleveland - Akron Sign Co., including stocks and equip. destroyed	625

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Bids Wanted, For Sale and Help Wanted $5 *per inch. Position Wanted,* $2.50 *per inch*

WANTED

Jobbers to sell Morning Pride Firecoats, with Wing Freedom Sleeves, Chest Protector, Wool Wristlets, Synthetic Rubber. Write Morning Pride Mfg. Co., 1986 Home Ave., Dayton, Ohio.

REAL OPPORTUNITY

Outstanding growing Fire Department in sunny California is in need of high quality firemen. Excellent salary, conditions, and retirement plan. Only experienced proven young firemen with family can be considered. Write fully including experience and recommendations to Chief Thomas F. Cuff, Menlo Park, Calif.

Philadelphia, Pa.—Modernly equipped barn destroyed 50

Los Angeles, Cal.—Vegetable Oil Products Co., two bldgs. destroyed; another damaged 60

Detroit Lakes, Minn.—Graystone garage, 18 cars and truck stored there, a number of tires, office records and supplies destroyed 50

Mamaroneck, N. Y.—Three industrial plants consisting of the bldgs. of the Albert W. Barnhart Co., the Westchester Wholesale Warehouse, Inc., and the Westchester Chemical Corp., destroyed 200

Dallas, Tex.—Grove Theatre destroyed .. 50

Richmond, Va.—Camp Howze Ordnance area warehouse damaged 50

Spokane, Wash.—Peters & Sons greenhouses damaged 50

Los Angeles, Cal.—Roof and portion of the second story of the Bel-Air dwelling of Ralph R. Huesman, damaged..... 50

Hollywood, Cal.—Ciro's popular film colony night club, damaged 50

Pottstown, Pa.—New York department store destroyed 70

St. John's, N. F.—Allied Merchants Service Club destroyed 125

Roseburg, Ore.—Josse Furniture Co. and nine addl. mercantile firms destroyed.... 170

Rock Hill, S. C.—Dixie Laundry, C. M. Sibley's grocery store, and the shop of the Catawba Lumber Co. destroyed.... 60

Priority Ruling Interpreted

The term "fire protective equipment" as used in Priorities Regulation 3 (Item 13, List B), includes only end items and does not include materials or parts required for repair or maintenance of existing equipment, according to an interpretation issued recently by the War Production Board.

Purchasers of end items are not entitled to obtain those items on preference ratings assigned for maintenance, repair and operating supplies (MRO ratings).

For example, a fire hose coupling is an end item of fire protective equipment, and therefore, under the interpretation, its purchaser could not use a MRO rating. Material to repair a fire hose coupling, however, is not an end item and may be obtained on such ratings.

Now in Australian Army

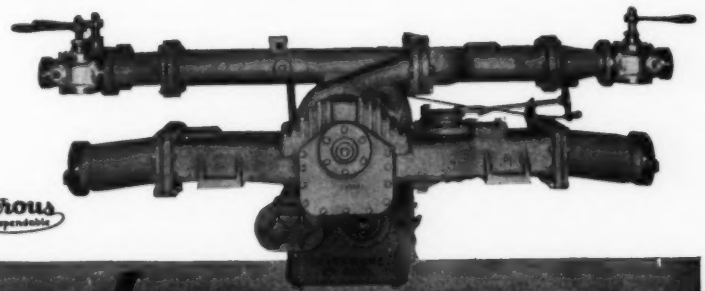
Joseph Gunner, an active correspondent of FIRE ENGINEERING from Australia for many years, is now serving as a Lance Corporal in the 51st Australian Field Park. In addition to his new duties, he has become engaged to Miss A. Rowlands of Queensland.

VETERANS OF THREE WARS IN...

Continuous Service

WATEROUS PUMPS ... not a few in service since the Spanish American War, many veterans of World War I and hundreds doing service on the many fronts of World War II ... all receive prompt attention from our parts department. WATEROUS Pumps have established a record of long and trouble free service and with little time out. Specify WATEROUS on your new fire apparatus and enjoy many years of dependable protection.

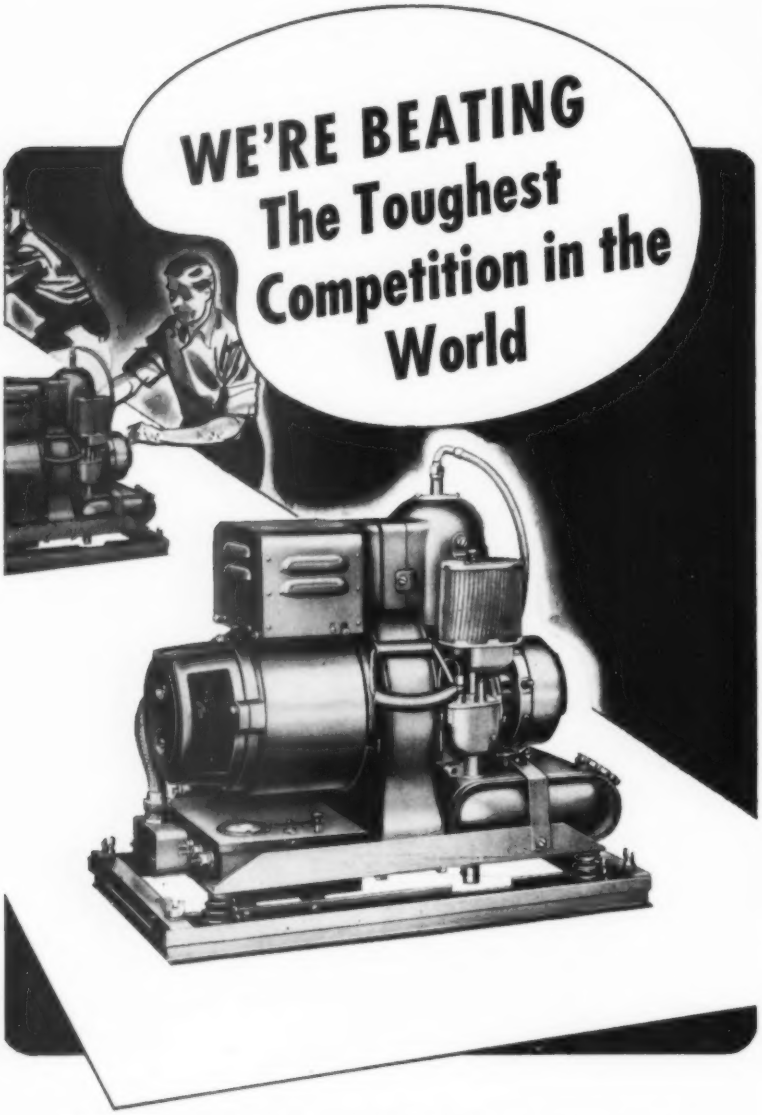
WATEROUS COMPANY, ST. PAUL, MINN.



WATEROUS

CENTRIFUGAL-ROTARY

FIRE PUMPS



Right now, our job is to produce better and more portable gasoline-engine-driven generators than our enemies—Germany, Italy and Japan. It's our biggest job. We are faced with tough competition. But it will help us and help you. To meet the ever-increasing demands of the Army and Navy, we have made many important improvements in our units and we have multiplied our production several times over. This means better and more Homelite Portable Generators for your use after the war.

We're meeting the demands of the military forces with flying colors. We'll be ready to meet your demands, with equal success, when peace is finally declared.

HOMELITE CORPORATION

PORT CHESTER, NEW YORK

Chief Rumsey to Retire

The Detroit, Mich., Fire Department will lose one of its most progressive key men on September 1 when Edward C. Rumsey, Chief of the Bureau of Apparatus and High Pressure for the past

Edward C. Rumsey

twenty-seven years, retires on his own application.

An automotive engineer who pioneered in the motorization of the Detroit Department, one of the first of the larger American cities to change from horseflesh to horse power. Chief Rumsey advocated the use of pneumatic tires, motor raised ladders and worm drive axles. He was a champion of the use of undertrussed aerial ladder trucks as auxiliary water towers and also four-wheel brakes. He championed closed bodies for pumping engines of which Detroit now has twenty-one. Ambulances, floodlight trucks and rescue cars were in his program. More recently he was out in the front rank of Detroit's preparedness programs for civilian defense and especially the use of master sirens for air raid alerts. Chief Rumsey has no immediate plans. Detroit is losing one of its best officers.

JERRY DALY.

Friendship Fire Association Elects Officers

The annual election meeting of the Friendship Fire Association was recently held at the Association's Headquarters, Engine Company Number One, 1643 K Street, N. W. Dr. Edward R. Gookin, prominent Washington eye specialist, was reelected Chief for the third consecutive year. Other officers included, Lester Steinem, Corporation Counselor, Deputy Chief; Roy Wiseman, Chief Secretary; Elmer Schloeder, Chief Historian and Chief Treasurer, and Dr. William D. Claudy, Chief Publicist.

Friendship Fire Association is an organization of professional men whose interest in fires and fire fighting have led them to further the purposes of the D. C. Fire department in every possible way. They have recently completed a map project for the Transfer Officer of the District of Columbia Fire Department, which enables him to spot the movements of companies by means of electrically controlled signals.

Convention Dates

July 23-24—CENTRAL NEW YORK FIREMEN'S ASSOCIATION. Annual meeting, Auburn, N. Y. President, H. V. Wood, 21 French Avenue, Auburn, N. Y.

July 26-28—WISCONSIN ASSOCIATION OF FIRE CHIEFS. Defense conference. Milwaukee, Wis. Secretary, Chief Arthur Rahn, Two Rivers, Wis.

August 10—STATE FIRE CHIEFS ASSOCIATION OF VIRGINIA. Annual Meeting, Charlottesville, Va. Secretary, Edward F. Ware, Hampton, Va.

August 11—VIRGINIA STATE FIREMEN'S ASSOCIATION AND AUXILIARY. Annual meeting. Charlottesville, Va. Secretary, R. B. Barker, Newport News, Va.

Aug. 16-21 — PENNSYLVANIA FIREMEN'S TRAINING CONFERENCE. Fifth annual meeting. Lewistown, Penn. Secretary, Chief Charles E. Clark, Box 271, Wayne, Penn.

Aug. 17-19—INDIANA FIRE SCHOOL. Annual meeting, Indianapolis. Director, Dean W. A. Knapp, Purdue University, Lafayette, Ind.

Aug. 24-27—KENTUCKY FIRE SCHOOL. Annual meeting. Owensboro, Ky.

Aug. 24-27—DOMINION ASSOCIATION OF FIRE CHIEFS. Annual meeting, St. Catharines, Ont. Secretary, Chief James Armstrong, Box 56, Kingston, Ont.

Aug. 25-26—PACIFIC COAST ASSOCIATION OF FIRE CHIEFS. Annual meeting, Reno, Nev. Secretary, Jay W. Stevens, 1014 Marchants Exchange Bldg., San Francisco, Cal.

Aug. 26-27—CONNECTICUT STATE FIREMEN'S ASSOCIATION. Sixtieth annual meeting, Hartford, Conn. Secretary, John Moehring, 56 Toms Road, Stamford, Conn.

Aug. 31-Sept. 3—NTERNATIONAL ASSOCIATION OF FIRE CHIEFS. Annual meeting. Chicago, Ill. Secretary, Chief Daniel B. Tierney, Arlington, Mass.

Sept. 6-10—WESTERN PENNSYLVANIA FIREMEN'S TRAINING INSTITUTE. Annual meeting. Pennsylvania State Teachers College, California, Pa. Secretary, Chief Henry Neill, Box 83, Vestaburg, Pa.

Sept. 18—NEW JERSEY STATE FIREMEN'S ASSOCIATION. Soldiers' and Sailors' War Memorial Bldg., Trenton, N. J. Asst. Secretary, Fred A. Trowbridge, Morristown, N. J.

Sept. 21-24—CALIFORNIA STATE FIREMEN'S ASSOCIATION. Annual Meeting, Sacramento, Cal. Secretary, H. E. Strasser, 2046 Oregon Av., Long Beach 6, Cal.

Sept. 27-29—INTERNATIONAL MUNICIPAL SIGNAL ASSOCIATION. Annual meeting, New York, N. Y. Secretary, Irvin Shulsinger, 8 East 41st Street, New York, N. Y.

Eastern Chiefs Meet

The sixteenth annual convention of the Eastern Association of Fire Chiefs was held in Baltimore, Md., on June 24-26. The meeting was well attended with about 295 delegates on hand.

Speakers at the meeting included Chief John J. Tubridy of the Buffalo, N. Y., Fire Department, whose topic was "Training of Auxiliary Firemen Along the Canadian Border"; Mr. T. Alfred Fleming, Director of Conservation, National Board of Fire Underwriters, New York City, who spoke on "Fire Losses in War Times"; George A. Cumming, Chief, Fire Protection Section, War Production Board, Washington, D. C., on "Priorities"; Jack W. Mason, Chief, Fire Defense Section, Protection Branch, Office of Civilian Defense, Washington, D. C., on "Auxiliary Fire Defense," and the Hon. James M. Landis, Director, Office of Civilian Defense, Washington.

Dean Landis in addressing the convention declared that firemen should receive a selective service classification similar to that assigned physicians.

Noting that the draft has seriously depleted fire fighting staffs which face difficulties in obtaining replacements, Landis said the problem "has reached proportions which involve a real threat to the public safety in some of the critical war zones of this country."

Under selective service provisions applying to doctors, a committee of civilian

War plants equipped with **INDIAN FIRE PUMPS** are ready for any type of fire. Accident, arson, sabotage—whatever the cause, **INDIANS** will put out the blaze before it spreads. **CLEAR WATER** does the job. No chemicals required.

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Essex County, New Jersey
D. B. Smith & Co., Inc.
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Gentlemen:
Our Fire Department has 23 Indian fire pumps. We call them the one man fire department. Our Fire Department used brooms to put out brush fires, which took hours; now with the Indian Fire Pumps we put them out in minutes, not hours. We can't understand why more Fire Departments don't use the best Fire Pump on the market, which is the Indian Fire Pump. It is a pleasure to recommend the Indian Fire Pumps.
CLINTON WEEKS
Fire Commissioner
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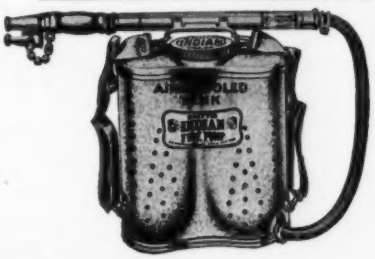
Wartime activities increase normal fire hazards and present many new ones. Whether caused by carelessness or sabotage, fires weaken our Victory efforts. INDIAN FIRE PUMPS bolster your reduced man power—INDIANS will handle 70% of your calls without laying hose. Only clear water needed. No chemicals. Order now. Warm weather brings many uses for these great extinguishers.



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PROTECTION—PLUS SAFETY and COMFORT

ARE SUPPLIED WITH THE

ACME FULL VISION ALL-PURPOSE Gas Mask

Not only should a gas mask provide protection, but the fireman needs Safety plus Comfort, in addition to having his mask both Gas and Smoke-tight.

The Acme Type FD FULL VISION All-Purpose Gas Masks have withstood many difficult tests in numerous fires. These tests have proven that firemen DO get Protection—Plus Safety and Comfort. These Acme Gas Masks, with their FD Type Canisters, provide firemen with protection against Carbon Monoxide, Acid Gases, Organic Vapors, Toxic Smokes, and Fumes.

Mr. FIRE CHIEF! If you have any gas masks that are NOT giving complete protection—write us explaining your difficulties and let us help you solve them.

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Fire Hydrants

Are given preference by so many fire protection and water works men because they know that more than half a century of experience goes into their manufacture and they embody valuable and exclusive features.

Write for the FACTS.

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doctors, meeting on the case of each physician called by his draft board, determines whether the physician is essential to his practice. The committee's recommendations are not binding on selective service officials but are frequently followed.

"Firemen," Landis said, "have always been regarded as persons in an essential industry by the selective service system. This, of course, never meant that they should be automatically deferred.

"It does mean, however, that in critical areas where dire hazards to war industries have increased abnormally, where manpower shortages are acute, firemen have an essential significance to this country.

"The fireman's place is comparable to that of doctors and should deserve much the same sort of treatment from local selective service boards."

He said that in several instances the shortage of firemen had endangered whole cities.

Moving pictures on rescue units, the new type bombs and other firemanic subjects were shown by Mr. R. Chandler Heagy of the Lancaster County Firemen's Association.

The election of officers was held on the last day of the meeting. The new officers for the year include: President, William J. Lutz, Ex-Chief, Wilmington, Del.; First Vice-President, Frank Deen, Assistant Chief, Lancaster, Pa.; Second Vice-President, William G. Wandras, Chief, Kearny, N. J.; Secretary, Ex-Chief Charles E. Clark, Wayne, Pa.; and Treasurer, George E. Mitchell, Ex-Chief, East Orange, N. J.

Department Store Blaze Injures Three Firemen

The Metropolitan Department store on Yonge Street in the City of Toronto, Ont., was badly damaged by a severe fire that swept through the second and third floors, and also threatened to spread to the adjoining buildings.

The fire originated in the basement where chickens were being roasted and the flames shot up the ventilation system and then spread through the partitions from the basement to the top floor.

The alarm was sent in at 5:30 a.m. from Box 34, and when the first companies arrived, they found the building enveloped in dense smoke. Assistant Deputy Chief Peter Hurd ordered a second alarm to be transmitted. This was received at the fire alarm switchboard at 5:34 a.m., calling out Chief George Sinclair, five engine companies, two aerial trucks, and one high pressure truck.

The fire was fought from lays on Yonge Street from the ladders and also two lays into the building. Additional streams were played off the adjoining rooftops.

When firemen had fought the blaze for approximately ten minutes, an explosion caused by back draft hurled glass and other debris into the street, causing injury to two firemen. Several were overcome by the dense clouds of smoke.

At 7:50 a.m. the second alarm section were sent home, and by 9:30 a.m. the fire was out.

Chief George Sinclair was hit by a street car, injuring his shoulder, but he continued on with his work.

Fifteen lines of 2½-inch hose were used.

JOHN KARL LEE.

Southeastern Chiefs Hold Convention

The Southeastern Association of Fire Chiefs held its sixteenth annual convention in Roanoke, Va., on June 21-22.

Speakers on the first day's program, over which President Floyd C. Pfaender presided, included Jack Mason, Chief, Fire Defense Section, Office of Civilian Defense, Washington, D. C., who explained OCD methods for cooperation with the nation's fire departments in combating fires brought about by possible enemy action; J. H. Wyse, State Coordinator, Office of Civilian Defense, Richmond, Va., and George A. Cumming, Chief, Fire Protection Section, Governmental Bureau, War Production Board, Washington, D. C.

Mr. Mason, in his talk, discussed the four OCD units which have been set up to work with fire departments. They are: 1. Equipment Unit—An organization which confines itself mostly to research in an effort to develop substitute materials for use in fire fighting equipment. 2. Mutual Aid Unit—Organized to effect the cooperation of emergency services between various cities throughout the nation. 3. Personnel Unit—For the purpose of training auxiliary firemen and fire guards. 4. Educational Unit—Dealing directly with the education of the public in preventing and fighting fires.

Highlights of the second day's session included a talk by H. I. Bobbitt, Special Agent, Federal Bureau of Investigation, Richmond, Va., on Sabotage; a paper by Harold I. Baumes, Executive Secretary, League of Virginia Municipalities on "Wartime Municipal Fire Protection," in which he called upon all the fire departments represented to do their utmost in the protection of their communities; a paper by Fire Chief W. E. Sykes, of the Norfolk Navy Yard Fire Department, on "Navy Yard Fire Protection"; one by Chief Edward J. Cannon of the Norfolk, Va., Fire Department on "Waterfront Fire Protection." Frank A. King, of Pittsburgh, Pa., spoke on "The Use of the Self-Contained Breathing Apparatus," and Chief W. W. Stephen, of the Monsanto Chemical Fire Department, Anniston, Ala., explained the fire hazards of materials used in the making of synthetic rubber and also methods of preventing and extinguishing blazes in this type of material.

At the session devoted to the election of officers, Chief James M. Duncan, of Alexandria, Va., was elected President; Chief Henry R. Chase, of Miami, Fla., First Vice-President; Chief William M. Mullins, Roanoke, Va., Second Vice-President, and Chief Walter W. Stephen, Monsanto Chemical Corporation, Anniston, Ala., Secretary-Treasurer.

Cigarette Causes Theatre Fire

Fire, attributed to a smoldering cigarette, recently did damage estimated at $15,000 to the University Theatre, Berkeley, Cal., as it gutted the interior during a two-alarm fire.

Four firemen were injured as they fought the early morning blaze under direction of Chief William Meinheit. Chief Meinheit said the fire was caused from a cigarette left in the loge section, which is heavily carpeted, after the last show.

BOB GREENOCK.

Fast protection for the fireman, when duty calls for action "up front" in fire or explosion emergencies. Consisting of an upper-and-lower durable asbestos garment, with helmet, gloves and boots attached for complete enclosure, the M.S.A. Asbestos Protective Suit prevents entry of flame, guards head from injury, and enables effective work at the scene of emergency.

The helmet of the suit is composed of a laminated-bakelite Type R Protective Skullgard, asbestos-covered, with front and rear aprons to protect head and neck. The back apron of the hood is sewed securely to the body portion below the shoulders, while the front apron is fastened into a flap at the chest with artic-type fastenings. Ample unobstructed vision is permitted by a large window in the hood, made of heat-resistant glass. Zippered openings in body are flap-covered; zippers at wrists and ankles speed entrance to the suit.

Full cut for working freedom, without unnecessary bulk, the M.S.A. One-Piece Asbestos Protective Suit is available in a Universal size only. It is necessary, however, that the helmet size be specified. Small headsizes, 6⅞ to 7⅛; Medium 7¼ to 7½; Large, 7⅝ to 7⅞. Write for detailed Bulletin CF-9.

MINE SAFETY APPLIANCES CO.
BRADDOCK, THOMAS AND MEADE STS., PITTSBURGH, PA.
District Representatives in Principal Cities

"Git thar fustest with the mostest"— with BUCKEYE!

Fig. 930
Junior Type Roto-Ray

Fires are put out like General Nathan Forrest said battles are won, by "gitting thar fustest with the mostest."

Buckeye Signals get you there quickly because Roto-Rays and Whistles clear the way by night or day. And when you use Buckeye Shut-off Nozzles that *will not leak*, and various other accessories you have the finest products ever made for fighting fires.

You can count on Buckeye to do its part in any emergency. Write for Catalog.

BUCKEYE IRON & BRASS WORKS
324 East 3rd Street
Dayton, Ohio

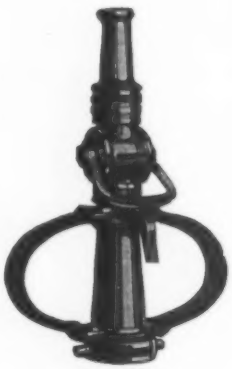

Fig. 900
2½" Shut-off Nozzle

Fig. 935
Junior Chiefs' Car Whistle

BUCKEYE
Fire Department Accessories

Have You Any Idle Used Fire Equipment For Sale?

- Classified advertisements in FIRE ENGINEERING bring results because they are read by the nation's leading municipal and industrial fire chiefs and fire officials. Used fire apparatus, equipment and supplies are sorely needed to-day.
- Rates are low — only $5 per column inch and if three or more consecutive insertions are run — a discount of 10% is allowed.

FIRE ENGINEERING
24 West 40th Street **New York 18, N. Y.**

John Ahrens Dead

John P. Ahrens, retired vice-president and one of the founders of Ahrens-Fox Fire Engine Company, died June 11th at Christ Hospital in Cincinnati, following an illness of eight weeks. Mr. Ahrens was seventy years of age and had been actively engaged in the fire engine industry for more than fifty years.

John Ahrens' father, Chris Ahrens, was foreman of the Lane & Bodley plant which, in 1856, constructed in Cincinnati the first steam fire engine built in this country. Chris Ahrens bought this fire engine business from Lane & Bodley in 1865 and established the Ahrens Manufacturing Company. John Ahrens was literally raised in this fire engine atmosphere and at the age of fourteen began his machinist apprenticeship in the Ahrens plant. Thereafter he devoted his entire career to the building and selling of steam and motorized fire engines.

When the old Ahrens Fire Engine Company was merged with other factories at the turn of the century John Ahrens continued with the steam fire engine sales department of the consolidated company. In 1905 he joined his brother Fred and two brothers-in-law, Charles R. and George W. Krapp, in organizing a new Ahrens Fire Engine Company for the manufacture of the Continental Steamer. The name of this company was shortly changed to Ahrens-Fox Fire Engine Company and they became pioneer builders of motorized fire apparatus.

Mr. Ahrens' only son, John P., Jr., died six years ago while Pittsburgh manager of Fabric Fire Hose Company. Mr. Ahrens is survived by his widow, a grandson, one brother, and four sisters.

CLARENCE E. MEEK.

Illinois Fire College Held

The Nineteenth Fire College, held under the auspices of the Illinois Firemen's Association, met at the University of Illinois, Champaign-Urbana, on June 8-11.

Approximately 530 delegates were in attendance, representing 154 cities and towns in Illinois and six other states.

Highlights on the program included papers by Dean C. M. Thompson, State Rubber Coordinator, Champaign, on "The Rubber Situation in Illinois"; by Hon. John H. Craig, State Fire Marshal and State Fire Coordinator, Springfield, Ill., on "Defense Training in Illinois in 1943, and Distribution of OCD Equipment"; by Major J. R. Weber, Internal Security Division, U. S. Army, Sixth Service Command, Chicago, on "The Fire Fighting Service in the Division of Internal Security"; by A. H. Gent, Fire Prevention Engineer, Office of the Chief of Engineers, War Department, Washington, D. C., on "Design Trends in Fire Apparatus"; George Tatnall, Engineer, National Board of Fire Underwriters, Chicago, on "Inspection of Property Adjacent to War Plants"; John F. Tillingast, State Rural Fire Coordinator and District Forester, Division of Forestry, State of Illinois, Springfield, on "Rural Fire Protection and Control and Farm Protection"; J. T. W. Babcock, Engineer, Western Factory Insurance Association on "Special War Hazards and Their Control"; M. I. Parker, Engi-

neer, Missouri Inspection Bureau, St. Louis, Mo., on "Mutual Aid—Public and Private Fire Protection"; and a number of other interesting papers. A demonstration of a "Control Center for Plant Protection" was given under the direction of Lieutenant Charles Dutreau and Master Sergeant Boyer, of the War Department Civilian Protection School, Lafayette, Ind.

Officers of the Illinois Firemen's Association include William R. Stoneham, Wood River, President; Chief Roy Alsip, Champaign, Secretary; and Simon Kellermann, Jr., Edwardsville, Ill., Treasurer. L. H. Provine, of Urbana, was Director of the College.

Iowa Chiefs Elect Officers

At the annual meeting of the Iowa Fire Chiefs Association, held in Ames, Ia., on June 22nd, the following officers were elected: President, Chief Charles L. Slade, Des Moines; Vice-President, C. A. Stephenson, Red Oak; Secretary-Treasurer, Chief R. H. Grant, Fort Dodge. Ex-Chief L. B. Morris, who has served as Secretary-Treasurer of the Association for eighteen years, was elected Secretary-Treasurer Emeritus.

Black Hawk Quad County Fire Fighters Meet

At the meeting of the Black Hawk Quad County Fire Fighters Association held at Sterling, Ill., on June 17, the following officers were elected: President, M. E. Schryver, Polo, Ill.; Vice-President, Fay Bennett, Sterling, Ill.; Secretary, Wayne Hawkins, Milledgeville Ill.; Treasurer, John Birt of Rock Falls, Ill.

Their next regular meeting will be held in connection with a fire training school on August 12 at Milledgeville, Ill.

EDWARD RHOADES.

Chief Heffernan Dead

Retired Division Chief James W. Heffernan of the New York Fire Department died on June 6. He had not been in the best of health for the past few years. He retired in 1940, after forty years of outstanding service.

He joined the fire department on July 6, 1900. Five years later he was advanced to Engineer of Steamer. He had a mechanical mind and a bit of inventive genius.

On March 1, 1908, he rose to lieutenant; Christmas Day, 1910, to captain; February 1, 1915, to battalion chief, and February 17, 1923, to division chief. All of this service was in Brooklyn until he was transferred to New York twenty years ago to the First Division.

Chief Heffernan designed the Heffernan hydrant gate for diverting the water at the hydrant outlet from an emergency 2½-inch hydrant line to the suction after a one-piece pumping unit was used to stretch to the fire and return to the hydrant and pick up the water flow from the hydrant without interrupting the line as originally stretched. He also invented the Heffernan distributor for flooding cargo holds of vessels afire.

Three years ago Chief Heffernan and his son, Division Chief William J. Heffernan made the first father-and-son combination to hold equal rank at the same time.

Midwestern Fireman's Suit

Combination Suit: Coat and Pants With Detachable Linings

Special combination suit of Midwestern Rubberized Coat and Bunker Pants, with detachable wool linings. Flexible elastic inner sleeve for wrist. Keeps out water, cold and sparks. All Midwestern coats are so equipped. The coat with Bunker pants below are Midwestern's outfit No. 101.

1—Adjustable collar strap.
2—Reinforced collar band for lining.
3—Lining attached with quick snap buttons.
4—Corduroy lined collar.
5—Reinforced, double stitched seams.
6—Reinforced by rivets at points of strain.
7—Vertical seams in sleeve shoulders.
8—Inside of fabric, heavily napped cloth.
9—Midwestern safety snaps.
10—Two outside pockets.
11—Midwestern's Special Vanitex fabrics.
12—Lining edges reinforced with rubberized fabric.
13—Wool detachable lining.
14—6-inch storm flap.

BUNKER PANTS

1—Lining held by snap buttons.
2—Rubberized fabric belt in lining.
3—Eight suspender buttons.
4—Safety snap on belt.
5—Two side and one hip pocket.
6—Wool lining.
7—Reinforced adjustable belt.
8—Midwestern's Special Vanitex fabrics.
9—Wide protecting flap.
10—Reinforced by rivets.
11—Cloth crotch pads for pole sliding.
12—Reinforced double stitched seams.

This wool lining can be added to any Midwestern Bunker Pants at a small additional cost.

MIDWESTERN MFG. CO.

MACKINAW, ILLINOIS

Write for literature, price list and material samples.

ARM YOURSELF WITH C-D/FOG ... NEW WEAPON FROM FAMOUS ARSENAL OF FIRE FIGHTERS!

Fire is an Axis ally. It must be fought, on land and at sea, in factories and on the road.

To help you fight fire effectively—General Detroit offers you *C-D/Fog*, a new extinguisher that smothers fire in a chilly blanket of carbon dioxide. Harmless to materials, C-D/Fog leaves no stain, is especially recommended for electrical, oil and gasoline fires.

C-D/Fog is made by the same people who give you Fire Guard, Alaskan, Floafome, and other famous brands. This is your assurance both of dependable manufacture and production in sufficient quantities to meet all vital needs. Mail coupon today for full details. We will also send you free Fire Protection Kit and large, lavishly illustrated catalog.

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Essential Service to Industry Since 1905

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Please rush details on C-D/Fog and others in your complete line of fire extinguishers.

*Name*_____

*Title*_____

Tear out this simplified coupon and attach to your letterhead.

WAR FARE

Alarms and Discussions Clipped and Culled from the War News of the Day, of Interest to the Fire Service.

Threats of Bombing Increase

The Axis, reeling under impact of Allied aerial offensives, has revived talk of retaliatory bombing. Now the German and Italian radio both scream demands for the bombing of New York, Washington and other places, while urging the Nips to blast the Pacific Coast. It is reported by some broadcasters that Adolph and Benito discussed bombing of New York at their last meeting. The plane to be used—it's said—is the Heinkel 177, powered by four 1,000 horsepower engines and capable of cruising at 248 miles per hour which, reports have it, could fly to New York from the French Coast with a hefty bomb load and return in 20 hours. Subs would provide the weather report.

In the June issue of American Magazine Director Dean Landis of the United States Office of Civilian Defense writes about the possibilities of the Axis bombing this country. Another who believes that it is going to happen is Col. William C. Bentley, who led American paratroopers in the invasion of North Africa. He said he was willing to bet 2 to 1 that either or both coasts of the United States will be bombed before September. Other army and navy officials predict that we may get it. There is a clamor in Japan for that country to bomb San Francisco and other Pacific Coast ports and it is said by many who know them that their "face won't be saved" until they have done it, cost them what it may. One prominent defense official predicts that Japan will bomb this country within 30 days after our next bombing of that country.

There you have it—what's **your** opinion? Write it on a piece of paper—put it away, and see how nearly you were right, say a year from today. But meantime, don't cease your preventive and defensive measures.

* * *

CD Firemen Save Town

Salem, Ore.—Were it not for the rapid and efficient work of civilian defense auxiliary firemen, the town of Siletz, Ore., would have been wiped out by fire, according to Jerry Whitlock, coordinator of the Lincoln County Defense Council.

The fire, starting from a rubbish pile blaze, theatened the entire business district of the town as the fire was fanned by a strong east wind that carried sparks through tinder-dry grass and brush in vacant areas.

Armed with stirrup pumps, the auxiliary firemen worked like veterans and brought the fire under control. Two homes were destroyed and a number of buildings damaged.

* * *

We're Being Bombed!

While some of us are patting ourselves on the back that we are not being bombed by the enemy, we're overlooking the fact that we're being the unwilling target of our own forces. With all the

GATE VALVE MAINTENANCE

A trade magazine recently asked a well known consulting engineer and water works operator to write a paper on the Maintenance and Operation of Gate Valves. He replied: "I have had so little experience with maintenance since I have been using M & H Gate Valves that I am rusty on the subject, but I will make an effort to write something."

A. W. W. A. HYDRANTS *Underwriters Approved*

Conform to American Water Works Association specifications. Approved and listed by Underwriters' Laboratories and Associated Factory Mutuals. Well known and widely used for many years.

SPECIAL TRAFFIC MODEL (shown at right) is designed to yield at ground line under impact, repair being simply renewal of breakable bolts and breakable coupling on stem. Dry top, revolving head, easy to lubricate. High efficiency because barrel diameter not reduced and there are no working parts or obstructions in waterway.

VALVES: A. W. W. A. types, iron body, bronze mounted with double-disc parallel seat or solid wedge type. Non-rising stem, outside screw and yoke; or with sliding stem and lever. Also furnished hydraulically operated. Square Bottom type operates in any position. All are rugged and dependable, made of best material with highest quality workmanship.

M&H VALVE AND FITTINGS COMPANY

ANNISTON, ALABAMA

rastly increased air traffic, and with so many of the planes of the military loaded with bombs and live ammunition, we're bound to be subject to the hazards attendant upon crashes and forced landings.

Another thing we're forgetting. If we saw a gasoline tank wagon with wings flying over our fair city, we'd shudder and duck for cover. Yet most of the larger planes commonly seen today are nothing but flying "tank wagons" and lucky is the community that is out of the path of one of these fellows when it crashes.

Evidence of this appears in nearly every newspaper. In the issue of the Chicago Tribune of May 11, 1943, the front page contained a full column of accounts of this nature, headed by that of the crash of an army experimental plane into barracks of the San Diego (Cal.) Marine Base, where four persons were killed and sixty-three injured. It smashed through a group of temporary buildings setting them afire, trapping persons in the wreckage. Another item concerned the explosion of a free balloon at Haddonfield (N. J.), wherein three were killed. In Portland (Ore.) a bomber crashed and exploded as it hit the ground killing five. Other crashes in Jacksonville (Fla.), Shreveport (La.) and Pocatello claimed many more lives —and started fires.

Most spectacular of the recent airplane accidents was that of the crash of the B-24 bomber into the world's largest illuminating storage tank in Chicago, where twelve were killed and the 500-foot tank became an inferno, requiring the efforts of a large part of the Chicago fire department to confine the blaze.

So it goes—Colorado Springs (Col.), three army nurses were among six persons killed in crash of a Flying Fortress. . . . Monroe (La.), five killed in crash and burning of a medium army bomber. . . . Ephrata (Wash.), nine men killed in crash of a 4-engined bomber, which collided with another bomber as it was taking off and caught fire.

Ask the chiefs of the fire departments in these cities, or of the camp or airport brigades. They know that we don't have to wait for "enemy action" to appreciate that there is a war on, and we are in it. Ask the residents of Berkeley Hills (Cal.), where a husky aerial bomb plummeted through the house of William White and smashed into the living room. This was just a "friendly bomb" dropped "by mistake"—but the White family know there'as a war on!

Let's quit kidding ourselves, and still further hasten our preparations for the war and the hazards that are here—now!

Salary Bill Discussed by Federal Fire Fighters

At a meeting of the Federal Uniformed Firefighters Association, matters of great importance to the membership were discussed, particularly a bill that was recently introduced in the House of Representatives known as Bill H. R. 2565 relating to salaries paid to federal firefighters. It was brought to the attention of United States Congressman Donald L. O'Toole that federal firefighters were being paid substandard salaries and he immediately endeavored to rectify the situation by introducing this bill for the purpose of bringing the salaries of federal fire fighters to equitable standard.

TRUMPET BRAND
CUSHION BALL
SHUT-OFF NOZZLE

The WOOSTER Cushion Ball is self-aligning

Style BN (Closed)

The "Wooster" Cushion Ball shut-off nozzle is the result of many years of experience and research trials that mark the development and perfection of shut-off nozzles for fire fighting.

Its simple but rugged construction eliminates the worry of replacements. The ball is made of a special corrosion resisting alloy and rests on a non-ageing, non-cracking synthetic rubber washer which is in contact with a smooth bore, one-piece non-interrupted discharge throat which may be threaded to any municipal standard. The cap or cushion segment is self-aligning because of a special guide stem which allows it to move up or down and rotate freely without side motion.

This piece of equipment comes in three standard sizes for 2½" or 3" hose—for 1½" small hose lines and for ¾" and 1" chemical or booster hose.

Write for further information and list prices

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BETTER BADGES

than you ever got before—

For the past 64 years we have supplied the fire fighters of America with the finest badges they have ever worn.

Now — because of the government's prohibition of the use of nickel, brass, copper, nickel plating, and chromium — we are making these badges and insignia in sterling silver, sterling silver gold plated, rolled gold on sterling silver, and 14 karat gold.

Today — for just a little more, you get a sterling silver Braxmar Badge — without doubt the best badge you can buy anywhere.

Recommend Braxmar to all your fellow fire fighters and wear one yourself.

C. G. Braxmar Co., 242 W. 55th St., N. Y.
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The blue covered catalog is the latest published but write for our new price list. Only prices in the catalog on 14 karat gold items are still in effect. All auto plates are discontinued for the duration.

BRAXMAR BADGES

Standard for over 64 years

New England Chiefs Meet

(*Continued from page 364*)

Boston, Director of Vocational Edu tion, speaking on the subject, "T Vocational Fireman Program in t War Emergency." Mr. Stratton t the chiefs that 5,000 persons, includi many women, had been trained in phases of civilian defense in Massach setts. He gave an outline of the acco plishments of his department since Pe Harbor, and said there is need of simi programs in many other states.

"With departments undermanned cause of the war and its many angl this educational project is more esse tial than ever before." He described t type of training in zone schools for re ular and auxiliary firemen, voluntee and private manufacturing plant gades.

Mr. Stratton was followed by M Howard E. Swain, Vocational Depar ment, Concord, New Hampshire, St Director John E. Nelson of Montpeli Vt., F. C. Parmenter of Chester, V Clinton L. Armstrong of Rockwe R. I., and Chief Frank Dickinson Brockton, Mass., each man speaking favor of the vocational training pr gram.

On Wednesday afternoon, the chi were treated to an unusual and br liant lecture on "Cooperation Betwe Fire and Police Departments" present in a forthright manner by Chief Police John M. Gleason of Greenwi Conn.

Fire Apparatus of the Future

It fell to Percy C. Charnock, Sta Fire Coordinator for Massachusetts, peer into the future and describe "Fi Apparatus of the Future." The geni speaker admitted that he had no occu powers, but said he would not be su prised if some day we would "be figh ing fire by bomb sights on planes a using gas extinguishers. Strang things have happened," he said, "an we all know that there has been a lon holiday since 1929 in the manufactur of suitable apparatus for industri needs."

An inventory made two years ag showed that 50% of New England's fi fighting equipment is obsolete, and h reminded the salesmen who were pre ent that they would have a golden op portunity after the war and after W.P.B restrictions had been lifted.

The chief demands for the future, h thought, would be for standardized pro ucts, easier for the manufacturer t make, easier for the purchaser to us with an added advantage regarding re placements and repairs. He looks for ward to the day when all apparatus wi be enclosed, giving protection for me and tools. "The entire chassis will b covered as a protection against the el ments, and there is where standardiz tion can cut down costs."

Mr. Charnock believes that only thro

classes of pumps will be produced: 1,250 gallons for the large communities, 750 gals. for medium sized towns and cities, and 500 gals. for the smaller places where fire frequency is low and funds are scarce. Describing conditions where ladder trucks are forced to go out with one or two men, he believes that such conditions demand better facilities for raising ladders quickly, and two lengths seem advisable, 65-ft. and 100-ft. He doubts if longer ladders will be made after the war.

"Water towers are out," he stated. "I doubt if new ones will ever be made." He said the need of special service trucks is controversial, but in his opinion special equipment, especially lighting units, could be carried on regular pumpers and ladders, making them available at all times.

As to radio, he predicted that two-way communication will be on each piece of apparatus and that portable "walkie-talkie's" will be available for firemen after the war is over.

"What will become of O.C.D. equipment?" he asked with a smile. "Will it, as some say, be sold to the communities that now have it, for a dollar, or, as others suggest, be assigned to a great national stockpile in case of another war?"

"I don't think," he added, "that many chiefs will want to tote trailers, but surely, an acceptable means of mounting the portable pumps can be found. Two or three pumps could be mounted on a sturdy 8 or 10 ton chassis and be enclosed. It seems advisable in this case to use a chassis with its own propelling mechanism and a separate pumping unit. This is a problem for the manufacturers."

Small Town Fire Defense

The final speaker of the day was soft-spoken, silver-haired Chief Allen Payson of Camden, Maine. He apologized for being in the presence of "big-shots" and then did a first rate job in boosting his native town. Speaking on the subject, "Small Town Fire Defense in War Activities," Chief Payson described the multiple duties and dangers dumped in his lap since Pearl Harbor. Camden with a peacetime population of 3,600 today boasts the largest wooden shipbuilding yard in the country. Woolen mills and factories work twenty-four hours a day. There are two large sawing mills and several smaller industries. Together these new wartime activities represent an investment of $11,000,000 and a weekly payroll of $65,000. Chief Payson described the progress of fire protection in the huge shipyard from the time when it was a thirty-man plant to the present, with 1,500 employees.

He mentioned the fact that Camden had the first 500-gallon pump in New England, and that they had received considerable O.C.D. equipment. He has been especially successful in the extensive training of company workmen, fire prevention and the supervision of proper first aid equipment. He told of

The story of

THE BOMBER THAT WOULDN'T BURN

SEVERAL weeks ago fire prevention officers of a bomber base came to us for help. A demonstration of fire extinguishment methods for aircraft crash fires was to be staged on a full scale model of a B-17 Flying Fortress—wooden framework covered with doped airplane fabric. Their problem was to find some means of retarding the destruction of the bomber by fire sufficiently to permit the demonstration of various extinguishment techniques. 50 gallons of crank case oil were to be smeared on all leading edges, 150 gallons of high octane gasoline were to be placed in wings and fuselage tanks and 180 gallons sprayed over the model before setting it afire.

On our advice the wooden framework of the bomber was protected with two coats of Firepel "S".

When the gasoline and oil were ignited, the fire was so intense that the firemen needed the protection of water curtains—yet in 14 minutes the fire was out.

The wooden framework of the bomber was still standing, and official motion pictures show the unsuccessful efforts of the fire party to shake the framework down.

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By Fred Shepperd. Published in response to numerous requests from fire department officers and men working for advancement, this new book embraces the famous "Promotional Study Course" which ran serially in FIRE ENGINEERING during the past few years and proved to be so tremendously popular. Covering in chapter lessons most of the important phases of fire protection promotional study — mainly in questions and answers form—all of it is in the concise style generally used and preferred by civil service examiners.

To fire chiefs and other officials responsible for preparing examinations, this book will be found most helpful. And it is a mighty good reason, too, why fire officers and men should find it of inestimable value in studying for advancement.

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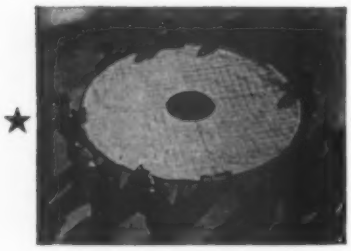

ARE the fastest means of Safe Rescue. Thousands of lives have been saved without injury by jumping into ATLAS NETS. This fact alone should prove the worth of life nets in rescue work.

ATLAS has overcome the old idea that nets are only a last resort. They are easily moved from one danger point to another and are instantly ready to do their job "saving lives."

Think of the person who is trapped by flames. It might be you, or one of your family. What a welcome sight to look down and see an ATLAS LIFE NET and know you will land safely.

Because of their sturdy construction and special features which absorb impact and reduce shock on landing they are the safest means of rescue for the rescuer as well as the rescued.

Write today for literature describing the ATLAS LIFE NET and ATLAS LIFE BELTS.

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Do as thousands of fire-fighters — Wear H. S. COVER'S famous Nod & Shake

FOG-PROOF GOGGLES

Not just ordinary gas-tight, smoke-proof goggles! Water placed inside lense keeps fog off indefinitely!

SAMPLE $1.65

H. S. COVER, 68 Chippewa St., South Bend, Ind.

the constant watch being maintained over huge log piles, roadways composed of slabs and shavings, and the big garages where vital stocks and delicate instruments are now stored.

In spite of his modest demeanor, Chief Payson's record proves that he has the situation well in hand.

While the chiefs were attending the Wednesday afternoon session, the ladies were given a tea in the Pine Room of Hotel Berwick by Miss Helen Koltonski, sister of Chief Koltonski, Superintendent of Riverside, the state reformatory for women. The refreshment table was decorated with bouquets of summer flowers and lighted candles. Miss Koltonski surprised the ladies with homemade fancy tea cakes and a coffee frappé which included country made chocolate ice cream, coffee and heavy cream. Mr. George Tousignant, well-known New York organist, and Miss Priscilla Ellwood furnished the musical program.

Many of the ladies visited the model reformatory, where Chief Koltonski's mother acted as hostess.

The annual banquet was held at the Mead Community House, with nearly 400 in attendance. M. K. Smith acted as master of ceremonies, and the speakers included Mayor Wayne Temple, Chief Koltonski, and Pres. Ward of the Chamber of Commerce, who presented souvenir gifts of marble to retiring President Chief Mahoney and Chief O'Hearn, veteran secretary and treasurer of the Association. An exceptionally fine vaudeville program directed by Frank A. Vennet was enthusiastically received by the chiefs and guests. The principal orator of the evening was Mayor Arthur J. Frawley of Lynn, Mass., who declared in a ringing speech that America has not yet felt the pains of war, and called for additional sacrifices in order to back up our fighting men on all fronts.

Election of Officers

The final session on Thursday was devoted to resolutions and election of officers for the coming year. Chief Michael W. Lawton of Middletown, Ct., was elected president.

Other officers elected were: first vice-president, William T. Happny, Concord, N. H.; second vice-president, Allen F. Payson, Camden, Me.; secretary-treasurer, John W. O'Hearn, Watertown, Mass., one of the organizers, who is beginning his 21st term, and the following directors: Oliver T. Sanborn, Portland, Me.; Charles H. French, Manchester, N. H.; Alfred H. Koltonski, Rutland; A. J. Cote, Woonsocket, R. I.; Stuart M. Potter, Greenwich, Conn., and Joseph E. Scanlon, Lynn, Mass.

Sergeant-at-arms, Michael J. Shea, Fitchburg, Mass; New England director International Association, Selden R. Allen, Brookline, Mass., and chaplains, Rev. Michael F. Collins, Marblehead, Mass., and Rev. H. Chester Hoyt, Holyoke, Mass.

Chief William C. Mahoney of Pea-

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Headquarters for *"DEPENDABLE"* FIRE APPARATUS and FIRE DEPARTMENT SUPPLIES

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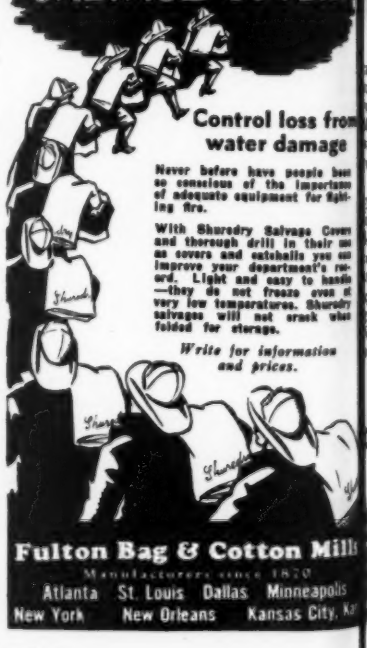

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Never before have people been so conscious of the importance of adequate equipment for fighting fire.

With Shuredry Salvage Covers and thorough drill in their use as covers and catchalls you can improve your department's record. Light and easy to handle—they do not freeze even at very low temperatures. Shuredry salvages will not crack when folded for storage.

Write for information and prices.

Fulton Bag & Cotton Mills

Manufacturers since 1870

Atlanta St. Louis Dallas Minneapolis New York New Orleans Kansas City, Kan.

ody, Mass., president for the past two ears, was presented with the past presi- ent's badge and a $50 war bond.

The convention thanked Chief Kol- onski and the members of his family r the many courtesies extended dur- g the conference in Rutland.

It was voted to hold the 1944 confer- nce at the Balsams, Dixville Notch, . H., subject to war conditions.

Aerial Ladder Collapses at Fire

While being operated at a small fire on he ninth floor of the Newhouse Hotel, alt Lake City, Utah, on June 10, a metal erial ladder collapsed, killing a lieuten- nt and injuring three firemen.

While the cause of the accident has not et been reported officially, a committee ppointed by the City Commission, and onsisting of City Engineer W. D. Beers nd City Attorney E. R. Christensen, as made an investigation, in collabora- on with the Board of Underwriters of he Pacific, the State Industrial Commis- on and the U. S. Bureau of Mines. The ommittee is expected to issue an official eport on the matter shortly.

Distribution of Fire Protection Fund

The New Mexico law, which provides r the annual distribution of the "Fire rotection Fund," was amended by the ecent Legislature to allow incorporated ities, towns and villages whose popu- ation is five thousand or less, to allow xpenses of firemen in attending state, ounty and city "fire schools."

Written approval of the State Super- ntendent of Insurance must be secured r this expenditure and it will be neces- ry for the fire chief to submit full formation regarding the fire school hich he or members of his department esire to attend.

Fire Station Burns

Unable to sound the fire alarm be- ause of a short circuit and too busy to ummon additional help by telephone, wo members of the fire department in assena, N. Y., had a hectic half hour hen fire broke out in the fire station ecently.

The blaze started in an electric heating ystem used in the winter time on the re alarm equipment and spread rapidly own the hose tower before it was dis- overed by the two paid drivers on duty t the time. Using equipment from the pparatus in the station, they extin- uished the flames within a half hour. o estimate of the damage was given ut it was said to be considerable.

SANFORD D. DEWEY

Chief I. J. Stockwell Appointed to OCD

Governor John J. Dempsey of New exico has appointed Chief Ira J. Stock- ell of Carlsbad as State Chairman of e Office of Civilian Defense commit- e. Chief Stockwell through this ap- intment automatically becomes a ember of the State Council of Defense.

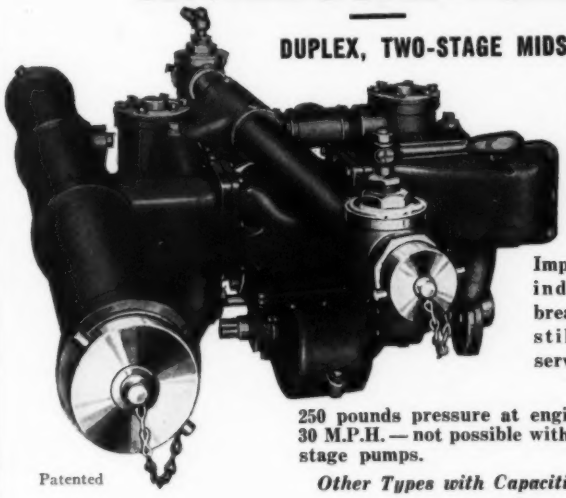
Barton Front Mounted

AMERICAN-MARSH PUMPS

Barton-American Midship

FIRE APPARATUS CENTRIFUGAL PUMPS

DUPLEX, TWO-STAGE MIDSHIP MOUNTED



Patented

High Pressure performance entirely unaffected when unit used to pump gritty water.

Impellers mounted on individual shafts — breakdown of one pump still leaves one for service.

250 pounds pressure at engine speed equal to 30 M.P.H. — not possible with conventional two-stage pumps.

Other Types with Capacities to 750 G.P.M.

WRITE FOR BULLETIN 8731F

AMERICAN-MARSH PUMPS, INC., Battle Creek, Michigan

Pumps — and pumps only — since 1873

Responsibilities on the Home Front

Fires in industrial areas are more than disastrous these days. See how Crackerjack Fire Hose handles with the ease that makes for swiftest action. Tough as it is pliable, it's built for *extra years* of hardest usage. Write for details of Crackerjack and other brands of—

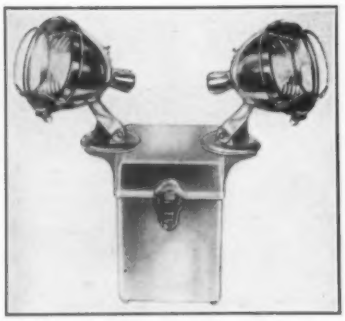
Fire Hose Made and Guaranteed by

The **AMERICAN RUBBER** *Manufacturing Company*

Factory and General Offices: PARK AND WATT STREETS, OAKLAND, CALIFORNIA

One of 70

"MASTER LIGHTS"



AUTOMATIC LIGHTING
EMERGENCY UNIT
(Type DUL)

Prevents panics and tragedy

FOR

● Theatres ● Halls ● Lodges
● Defense Plants ● Churches
● Key Positions ● Control Rooms
● Night Clubs ● Restaurants

"AUTOMATIC WHEN
OTHER LIGHTS FAIL"

→ NO TRICKLE CHARGER NEEDED

CARPENTER MFG. CO.
"Master ★ Light ★ Makers"
200 Sidney Street, Cambridge, Mass.

JANESVILLE QUALITY
TURN OUT CLOTHING
Still Available

Our turnout suits are giving excellent satisfaction in most of the large fire departments throughout the U. S. and

THERE MUST BE A REASON WHY SO MANY FIREMEN INSIST ON JANESVILLE QUALITY

Rubber and Duck Coats and Bunkers, Boots, etc.

JANESVILLE APPAREL CO.
JANESVILLE, WIS.

Smelter Destroyed by Fire

One entire wing of the American Smelting and Refining Company's plant at Selby, near San Francisco, engaged in smelting strategic war metals, was recently destroyed by flames which did damage unofficially estimated at $100,000.

The Selby plant fire department, aided by the Crockett fire department and Coast Guardsmen from the Coast Guard Fire Battalion at nearby Vallejo battled the flames for more than two hours and their efforts kept the fire confined to the one wing.

Smoke from the fire was visible for miles and the fire threatened the town of Selby as it swept through the 600-foot wing. The Coast Guard used some of the new water-borne fire barges in fighting the fire.

The blaze was discovered by a watchman and apparently started in the plant's sample area and burned around the base of the largest smokestack in the world, a landmark in the area for years.

Work at the smelter, which is filling war contracts, was not halted, and the greater portion of the plant was saved. The flames raged through a building which had been heavily timbered to withstand the strain of heavy ores. A freight car on a nearby siding was destroyed and two large tanks of sulphuric acid were threatened.

Plant guards said there was no indication of sabotage but the Federal Bureau of Investigation here said it was investigating the blaze.

BOB GREENOCK.

Longest Fire Run

Navy Lieutenant Edward J. Gaughan, a native of Boston, Mass., and a member of that city's Fire Department for twenty-one years, has been decorated for heroism after perhaps the longest "run" on record in response to a fire alarm.

With eight enlisted men, Lieutenant Gaughan flew from Norfolk, Va., to fight a fire aboard a warship in the tropics, an airline distance of 1,500 miles. He received the Navy and Marine Corps Medal and the citation was read off recently at Norfolk with Lieutenant Gaughan and the enlisted men receiving the salutes.

The citation told how they "boarded the vessel, which had been beached and badly gutted by fire when there was ever-present danger of combustible gases and explosion of unflooded magazines" to extinguish the blaze. It added that he and his comrades worked for hours "in the heat so intense that the glass tube on the thermometer burst."

THOMAS F. MAGNER

WPB Appoints H. H. Frank

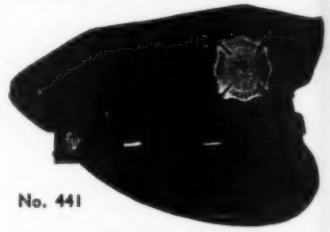
Appointment of Howard H. Frank as Deputy Director of the Safety and Technical Equipment of the War Production Board was announced by John J. Hall, Deputy Vice Chairman for Industry Operations.

Mr. Frank joined the Office of Production Management in August, 1941, and has been with WPB's Safety and Technical Equipment Division since February, 1943. Before coming to Washington he was Special Agent for the Prudential Insurance Company. He takes the position recently vacated by the resignation of George W. Angell.

WENTWORTH
FIREMAN'S UNIFORM CAPS
UNION MADE PROMPT DELIVER

No. 342

Wentworth Fireman Caps are made of the Highest Quality Standard Materials available and by the Best Skilled Union Craftsmen in all the New and Standard styles. Our 47 years of experience and skilled workmanship guarantee you AMERICA'S GREATEST CAP VALUE in all WENTWORTH FIREMAN CAPS.



No. 441

Write direct for latest circular and prices or see your local dealer.

WENTWORTH-FORMAN CO., INC.
578b Washington St., Boston, Mass.
Manufacturers
Fireman Cap Specialists for Over 47 Years

THE *New* WHEAT
Rechargeable Spotlight

MODEL 158

2500 FOOT BEAM
25000 CANDLE POWER
1000 HOURS OPERATION

Critical Materials Reduced to a Minimum to insure Availability

FEATURES

★ Positive "non-spill" Construction
★ Less expensive Operation than dry cells
★ Free use of Hands. Light carries conveniently on Shoulder Strap
★ Weighs only 92 ozs. complete
★ Simple to Charge and Water No need to take Lamp apart
★ Light can be Focused and Directed as Desired

WRITE FOR COMPLETE DETAILS

KOEHLER MANUFACTURING COMPANY, INC.
MARLBORO, MASSACHUSETTS, U.S.A.

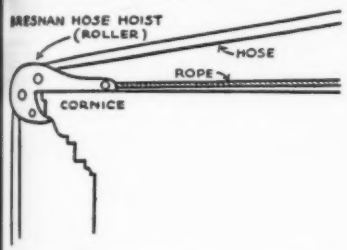
Practical Training for Auxiliary Firemen

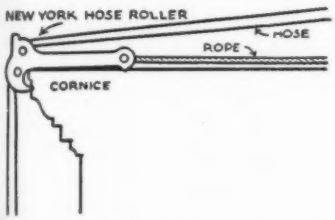
(*Continued from page 367*)

Q. What two types of hose hoists are commonly found in the fire service?

A. Bresnan and New York hose hoist.

The hose hoist, or hose roller as it is also known, is used for hoisting hose or ladders to the roof or upper floors of a building. In either case, it consists of a metal





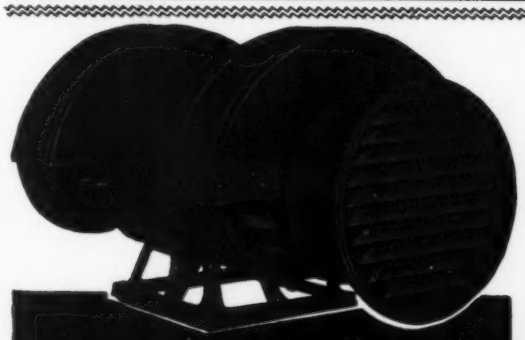
frame so designed that it will fit over a window sill or the edge of a cornice. It contains two rollers over which hose or ropes may be drawn with little twisting. A rope is attached to secure the roller when hauling hose over it to the roof of a building. This rope, if possible, should be passed several times around a chimney or other substantial projection or support and then securely fastened. If such support is not available, and if no other means is at hand to provide for securing the hose roller, a hole may be cut in the roof of the building, and the rope tied around one of the roof rafters.

The two types of hose rollers operate in precisely the same manner.

May Fire Loss

Fire losses in the United States during May were $29,297,000, according to the estimate given out by the National Board of Fire Underwriters. These estimated losses, under fire policies, are on an incurred basis, including an allowance for unreported and uninsured losses.

The loss in May was 14 per cent less than in April and 26 per cent more than in May, 1942. The losses for the first five months were nearly $11,000,000 more than for the corresponding period in 1942.



STERLING MODEL "M"

GENERAL ALARM SIREN

You Can Depend On It *ALWAYS*

The Sterling Model "M" Siren, while primarily built for fire alarm signals, is particularly well adapted for the emergency duties attendant on National Defense.

This sturdy public alarm with its shrill, penetrating and distinctive vibrations meets and solves both problems.

Rugged and dependable — it is built to deliver 24-hour service. Its performance has never been equalled by any of the other sirens on the market today!

Write for detailed literature

STERLING SIREN FIRE ALARM CO., Inc.
55 Allen Street Rochester, New York

★

The Wartime Fire Chief is faced with the problem of keeping every pumper in service. Hale Fire Pumps are making this job easier. They are known for consistent, reliable performance.

★

Write today for the Catalog and Folders on the complete line of HALE PUMPS

HALE FIRE PUMP COMPANY
CONSHOHOCKEN, PA.

Always Ready

QUAKER FIRE HOSE

CHEMICAL
•
FORESTRY
•
SUCTION
HOSE

QUAKER QUALITY

REG. U.S. PAT. OFF.

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Western Territory
QUAKER PACIFIC RUBBER COMPANY
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CAIRNS

In Regulation or Drop Brim Style, 8-Comb or Solid Top.

HELMETS

All the best features 100 years of "know how" have produced, are built into these sturdy helmets — including the CAIRNS Self-Adjusting Cushion Lining that grips the head and absorbs shocks. Rugged top grain leather is the material used, processed for strength and heat resistance, and strongly reinforced to hold the shape. Made in 2 weights, 12 sizes, and 3 ovals. "Keep Your Head With a Cairns."

DEPARTMENT RECORDS

You need our Loose-Leaf Fire Record Book, in sizes for 375 to 1500 alarms. And let us supply your Secretary's Record Books, Secretary's Forms, Certificates, etc.

Write for Catalog A

CAIRNS & BROTHER
Outfitters to Firemen Since 1836
444 LAFAYETTE STREET - NEW YORK

The Round Table

(*Continued from page 377*)

we use about four of these lights. They are sufficient to guide the men around the station. Should we receive an alarm during blackouts, operators will switch their headlights to the depressed or low beam and proceed with utmost caution. The speed of the apparatus should not exceed 10 miles per hour. At the present time we are using our sirens and bells. We do not use oscillating or flashing red lights.

Naturally response to fire alarms have been slowed up, but we believe it is more important to consider the hazards to men and equipment if the utmost care were not taken. Pedestrians must also be given consideration. Many times auxiliary units will be in the streets going to their posts.

I would recommend that fire equipment be allowed to travel with bells and sirens and that all apparatus travel at a rate of speed of not more than 10 miles an hour. Fire and emergency equipment should be identified by an approved block letter "E" and during this period of time only these emergency vehicles should be allowed to move.

Thomas F. Cavanaugh, Chief, Waterbury, Conn.: We use headlights and sirens moderately when responding to an alarm during a blackout.

So far we haven't had a real test to determine whether response is slowed up.

Paul P. Heinz, Chief, New Haven, Conn.: Responding to alarms of fires under blackouts is no different than at any other time.

Our trip lights in the station function as at any other time, but we have installed automatic light switches so that the lights shut off one minute after receipt of alarm. The station lights are also shielded so that there is no reflection on the outside.

Our blackout regulations concerning motor vehicles do not apply to fire apparatus. We run with full headlights, red lights, etc. Exhaust whistles have replaced sirens.

Street lights extinguished present the only problem in connection with responding during a blackout. To overcome this, we have ordered apparatus to proceed with caution and not over twenty-five miles per hour speed.

To date we have experienced no difficulty in responding during blackouts.

G. W. Stout, Chief, Charleston, S. C.: The usual precautions for safe driving are always taken. We use regular headlights, flashing red lights and bells. No sirens are used.

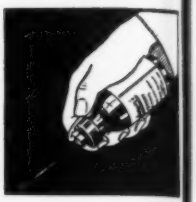
I would suggest that unnecessary vehicles be forbidden on the roads during a blackout in order to insure safe and prompt travel to fires by the fire department.

John C. King, Chief, Hartford, Conn.: We use extreme caution leaving stations and apparatus must slow down at intersections.

Oscillating red lights are used. Headlights are painted black three-quarters of the way. We cannot use sirens but have exhaust whistles. We do not find that our response to a fire is slowed up by these restrictions.

I believe the use of sirens would be more effective.

TREAT BURNS WITHOUT DELAY



Available through physicians' supply houses, safety equipment dealers and drug stores.

Promptness is vitally important in the treatment of burns. Gebauer's Tannic Spray in the dispenseal bottle is always ready for instant use. Stable, antiseptic solution forms pliable tannic film over affected area. Minor burns seldom require bandaging or dressing. Convenient. Economical. Literature on request.

THE GEBAUER CHEMICAL CO.
CLEVELAND, 4, OHIO, U. S. A.

Gebauer's
TANNIC SPRAY

"The Superior"
A MODERN and PROVEN
LIFE NET

The SUPERIOR LIFE SAVING NET is stronger than any other, because of the tested breaking strength of 1,800 lbs. of each individual rope.

The direct pull shock absorber system eliminates all friction and its greater resiliency provides for a safer, easier landing.

Made of Chrome Molybdenum steel, the frame may easily be folded for storage within a few seconds.

For the utmost in LIFE SAVING VALUE . . . "SPECIFY SUPERIOR".

For ECONOMY, have your old net converted into a "SUPERIOR".

Other SUPERIOR Products:
Training Nets and Structures
Ladder Belts
Life Size Training Dummies

William Mo...
Designer Consultant

SUPERIOR FIRE EQUIPMENT CORP.
235 E. 42nd St. New York, N. Y.

"ALL AMERICAN CHOICE"
INVINCIBLE NOZZLES
PREPARE — PROTECT

Portable equipment is the watchword of today.

Buy—

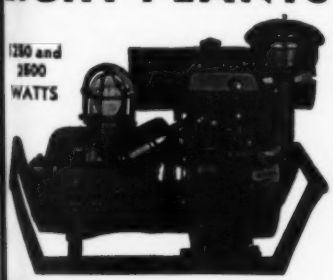
INVINCIBLE NOZZLES

and enjoy the benefits derived by experience of the pioneers in the nozzle field.

Fig. 403

F. N. McINTIRE BRASS WORKS
Successors to A. J. Morse & Son, Inc.
BOSTON, MASS.
1837 - - 1941

"U.S."
PORTABLE
LIGHT PLANTS



This 1250 watt, portable unit has been designed expressly for fire department use. It is small, light, compact and equipped with carriers for easy portability out on the job. Air-cooled 4-cycle engine 2⅝" bore x 2⅝" stroke. 2.4 H.P. 2 gallon fuel tank. Quick starting. Also 2500 watt size.

LARGER SIZES AVAILABLE

Write for Catalog.

UNITED STATES MOTORS CORP.
100 Nebraska Street, Oshkosh, Wis.

The Watch Desk

(*Continued from page 375*)

as proxies for the San Francisco Board. The presentation was made by an old friend of Charley's—Chief Fred Bowlen—who, incidentally, has just been made an acting division chief of the S. F. Department. And, as Historian and a lot of other things of the S. F. force, why shouldn't Chief Bowlen do the job? Did anybody ever remind you he's an orator?

Another interested spectator was the newly appointed California State Fire Marshal, Joseph Yockers. Jay Stevens wanted to be there, but he was detained in San Francisco on OCD business. Other guests assembled included Roi B. Woolley, Chief of the Coordination Unit, U. S. Office of Civilian Defense, Chief Brennan's brother, the well known song writer, and officers of the Los Angeles Fire Department. Chief John Alderson was the gracious host and the entire affair took place in his headquarter's office on So. Hill Street.

* * *

Promotions in San Francisco F. D.

Changes in command in three divisions of the San Francisco Fire Department were announced by Chief Albert J. Sullivan in May. The reorganization follows Chief Sullivan's recent promotion to Chief Engineer, succeeding Chief Charles Brennan.

Martin J. Kearns, ranking first assistant chief, who had commanded Division No. 2, received Division No. 1, Sullivan's previous post. Alfred J. Galli, new first assistant chief, from second in command of Division No. 1 to command Division No. 2. Dennis J. O'Donnell, first assistant chief, remains in command of Division No. 3, while Second Assistant Chief Edward D. O'Neili was moved from No. 3 to No. 1. George L. Trapp, Second Assistant Chief, remains at No. 2, and Battalion Chief Frederick J. Bowlen was named acting Second Assistant at Division No. 3 pending holding of a civil service examination for second assistant.

* * *

Bang! Goes Another Tire!

City firemen of New Albany (Ind.) are congratulating themselves while regretting the loss of a costly tire, and damage to fire apparatus. While truck No. 3 was "sitting" perfectly calm and collected in the firehouse, a tire suddenly "blew out." Parked near it was the city's newest apparatus—No. 1. Force of the exploding tire smashed the windshield of that truck and ripped away chromium with enough force to have killed anyone in the same place at the moment—but No. 3 apparatus was undamaged. The Brothers got cold chills thinking what would have happened had the tire let go while they were tearing to a fire.

* * *

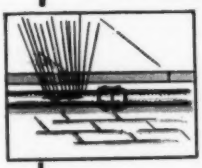
"Hot Dice!"

In Wichita (Kans.) Charles Murphy was awakened by smoke in his room. A hasty search discovered only more smell, so Charles hastily called the Brothers, who returned his call promptly to find—no dice! Well, not exactly no dice—because there was enough left of one of the numbered galloping dominoes to identify it. It was wedged in the radiator, which was hot. So were the Brothers when they learned there was "no dice." Wot a fire!

CONSERVATION FACTS
on how to save your hose

Fact No. 9

NEVER CLOSE DOWN NOZZLES TOO QUICKLY



To avoid straining weak lines and to avoid "water hammer" and shock to the pump and hose lines attached to it, shut down your nozzles very slowly—on long lines of hose where high engine pressure is maintained nozzles should be opened slowly.

More than just Fire Hose. . . . The Goodall line includes the finest quality—

Chemical Engine and Booster Hose
Suction Hose
Couplings, Strainers and Nozzles
Coats, Boots and Utility Suits

We are looking for some live-wire distributors in certain territories. Write to our main office, giving a full description of your set-up.

Write for Catalog Folder

GOODALL
RUBBER COMPANY

6 SOUTH 36TH STREET, PHILADELPHIA
Branch Stocks in Key Cities Across the Country

SEALAND TRAILER PUMPS

These mobile trailers made in 150, 250 and 500 gallon units are powered with gasoline motors, carry 500 ft. of double jacket Fire hose, and may be equipped with 100 gallon booster tanks. Skid mounted units can be furnished. Pumps can be purchased without trailers.

THE SEALAND CORP.
Centrifugal Pumps—Fire Alarm Systems—Modern Fire Apparatus
Post Road & Maple Ave.,
P. O. Southport, Conn.

"Sub Sighted" DEMANDS QUICK ACTION!

Civilian boats at war are "poison" to lurking subs. Two-way radios, with batteries kept charged by Briggs & Stratton powered generators, flash signals that summon warships or planes for "the kill." One more service stripe for rugged, dependable Briggs & Stratton gasoline engines. Hundreds of thousands are now serving our armed forces through many standard and special applications.

To prevent unnecessary repairs and to save critical materials needed for war uses, it is vital that all Briggs & Stratton 4-cycle, air-cooled gasoline engine users (both military and civilian) provide systematic care to insure maximum efficiency and longer service.

Proper lubrication with the right oil is the No. 1 "must" of the 4-point Service Program which includes periodical inspection—keeping engines clean — and always properly adjusted . . . Keep your engines in top condition. Your nearest dealer or Briggs & Stratton Service Station will gladly help you.

BRIGGS & STRATTON CORP.
MILWAUKEE I, WIS., U. S. A.

4 CYCLE
BRIGGS & STRATTON
GASOLINE ENGINES

Invest In Freedom—BUY WAR BONDS

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JULY, 1943

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THE NEW PIRSCH AERIAL LADDER

This new Pirsch multiple section wood aerial ladder represents the finest aerial ladder available today.

In the interest of the war effort, Pirsch discontinued the sale of the Pirsch patented metal aerial ladder, and for the duration offers this new wood ladder which has a half century of successful ladder building experience behind it.

The Pirsch aluminum-alloy aerial ladder will be available again in the future, but in the meantime give consideration to this new aerial ladder, America's best now available.

FACTS ABOUT PIRSCH AERIALS

1. **Time required to raise ladder from bed to vertical position: 12 seconds.**
2. **Time required to fully extend fly ladders: 12 seconds.**
3. **Time required for 360° traverse of turntable: 14 seconds.**

NOTE: a. The above timing represents actual stop-watch operating figures of a 100′ 3-piece Pirsch metal aerial.

b. Timing is for single, individual control operation. Total accumulated time can be reduced by operating two controls simultaneously.

c. Pirsch accelerator pedal permits slower operation when required.

Official U. S. Navy Photograph

PETER PIRSCH & SONS CO. KENOSHA, WIS.

"BUILDERS OF AMERICA'S FIRST ALL-POWERED AERIAL LADDER TRUCK AND AMERICA'S FIRST 100′ AERIAL LADDER"

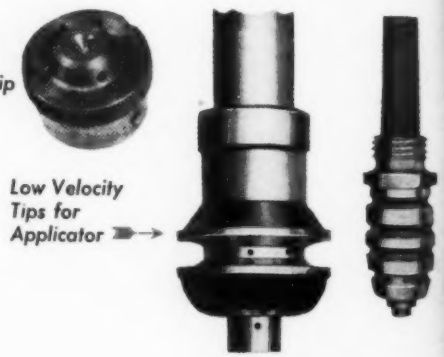
GOOD NEWS
FOR FIRE DEPARTMENTS

Heretofore FOGNOZLS have been constructed of critical materials which have restricted Fire Departments from securing the advantages of this equipment.

For several months our engineers have been experimenting with non-critical materials and have developed nozzles for you which will be in production soon.

In the meantime, send for your copy of FOGNOZL FACTS so that you will have the latest information on this subject as to present models, sizes and specifications.

- PROTECTION TO PERSONNEL
  TO FIREMEN AND FIRE VICTIMS
- RAPID EXTINGUISHMENT
  A MATTER OF SECONDS
- REDUCED WATER DAMAGE
  A RATIO OF 1 TO 30
- ECONOMY & AVAILABLE SUPPLY
  PLAIN WATER



3 POSITIONS OF LEVER WITH BALL STOPS

1 SHUT-OFF POSITION **2** WATER FOG POSITION (high or low velocity)
3 STRAIGHT STREAM POSITION

NOTE: It is important that you do not have to go through the straight stream to get the fog.

4 ft. or 10 ft. Extension Applicator

GRISWOLD ORIGINAL WATER FOGNOZL

Write now for your copy of

FOGNOZL FACTS

PREPARE NOW BY ACCUMULATING DATA ON THIS NEW WATER FOGNOZL FIRE-FIGHTING METHOD THAT HAS REVOLUTIONIZED OLD METHODS. FOGNOZL ACCOMPLISHMENTS ARE DAILY EMPHASIZED BY OUR ARMED FORCES.

● A BROCHURE OF **FOGNOZL FACTS** WILL BE SENT, WITHOUT OBLIGATION, TO THOSE ENGINEERS OR EXECUTIVES WHO WILL SO REQUEST IT ON THEIR OFFICIAL OR DEPARTMENT LETTERHEAD.

IN FOLDER CONVENIENT FOR YOUR FILE

FOG NOZZLE COMPANY

1520 EAST SLAUSON AVENUE ● LOS ANGELES, CALIFORNIA

FOG NOZZLE OF CANADA, LTD., MONTREAL, CANADA

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